CANADIAN GEOGRAPHICAL JOURNAL

OCTOBER
1941

VOL. XXIII
NO. 4

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The Canadian Geographical Society

49 METCALFE STREET OTTAWA, CANADA

CANADIAN GEOGRAPHICAL JOURNAL

Published monthly by
The Canadian Geographical Society
at 2151 Ontario St. E., Montreal

Editor *Gordon M. Dallyn*

This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustrations, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth, and other parts of the world in which Canada has special interest.

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The articles in this Journal are indexed in the *Reader's Guide to Periodical Literature* which may be found in any public library.

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

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Address all communications regarding change of address, non-delivery of Journal, etc., to the publication office, 2151 Ontario Street, East, Montreal, Canada, giving old and new address. On all new memberships, the expiry date will be printed on wrapper containing starting number. This will constitute a receipt for subscription.

Membership in The Canadian Geographical Society is $3.00 per year in Canada and other parts of the British Empire, which includes delivery of the Journal, postpaid; in United States, Mexico, France, Spain, Central and South America, $3.50; in other countries, $4.00. Make membership fee payable at par in Ottawa.

Member Audit Bureau of Circulations.

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Ontario: F. A. Dallyn, 21 King Street, E., Toronto, (Tel. EL. 2863)
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Eastern United States: Wells Constantine, 116 East 16th St., New York, N.Y. (Tel. ST. 92929)
Europe: Norah C. Perry, 5 Upper Dagnall Street, St. Albans, Herts., England

Entered as second-class matter at the Post Office, Montreal, Canada.

PRINTED IN CANADA

Wellington Harbour, one of the finest in the world, has a narrow entrance and deep water. The mountainous background helps explain New Zealand's rainfall. Both North and South Islands have a backbone of mountains.

NEW ZEALAND'S TRADE

by W. B. Sutch

NEW ZEALAND'S high level of production depends on one plant, grass, and two animals, the sheep and the cow which feed on the grass. If it were not for the mild climate and well spread rainfall, this high productivity would not be possible, but geography being what it is, New Zealand has developed to the position where it exports more butter* and cheese and mutton and lamb than any other country in the world.

New Zealanders are great meat and butter consumers. Nevertheless only about one-sixth of the butter produced in New Zealand and about the same fraction of the mutton and lamb is consumed there. Only about 3 or 4 per cent of the cheese produced is consumed in the country and about 2 per cent of the wool production. New Zealand is fourth among the wool growing countries of the world, producing about one-quarter of the world's supply of cross-bred wool.

New Zealand's pre-eminence in the production of high quality products of the pastoral industry is not due to geography and climate only. The imaginative public works programmes, particularly in the 1870's but also in later periods, have brought remote districts by road and rail into close touch with New Zealand's several fine harbours. Primarily, of course, New Zealand's large export trade in food products such as dairy produce, meat and apples is due entirely to the refrigeration process. But had it not been for the

*Assuming that the Danish total export of butter has been reduced.

Auckland City, north shore and harbour from Mt. Eden. Note the extinct volcano — Rangitoto — in the harbour. Auckland and Wellington are New Zealand's main ports.

public works development of New Zealand, the rapid expansion which did take place would not have been possible. In addition to the refrigeration factor, New Zealand has made use of other discoveries and inventions, notably artificial fertilizers, the cream separator and the mechanization of farm processes such as shearing and milking.

Summed up, New Zealand's export trade is due to climate, applied science and intelligent New Zealanders.

New Zealand's overseas trade is the highest per head in the world. Contrast the fact that New Zealand has a population under 1,700,000 with the fact that in 1940 it exported goods to the value of £73,741,000.* This total included —

Butter valued at	£18,228,000
Cheese " "	8,233,000
Beef " "	2,596,000
Lamb " "	11,019,000
Mutton " "	2,879,000
Pork " "	1,936,000
Wool " "	16,875,000

Other exports, which included gold, tallow, hides and skins, were valued at £11,975,000. Over £40 million of the total exports, therefore, were products needing a specialized kind of cargo ship with refrigerated space.

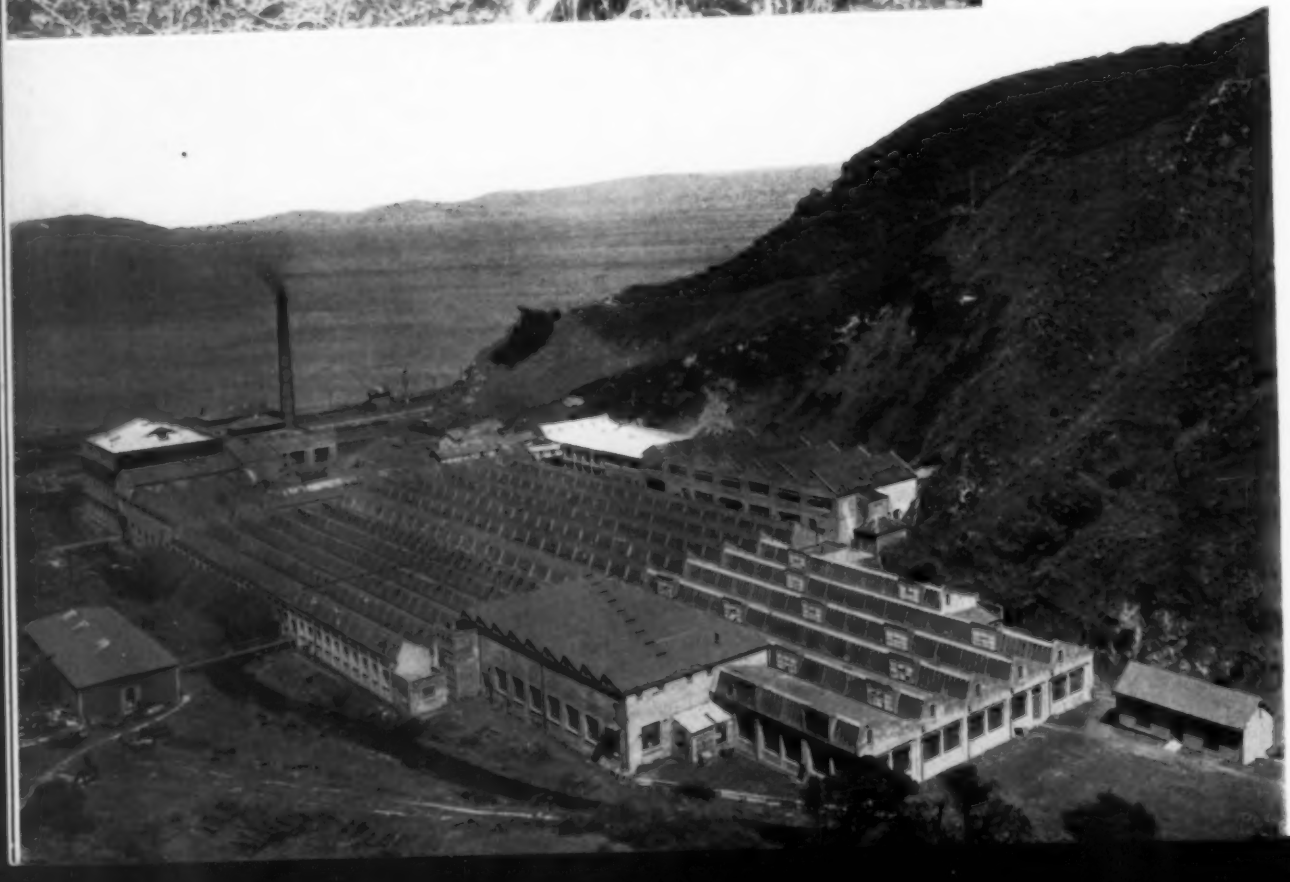
It will be clear then that New Zealand, a country over 1,000 miles from the nearest land mass, Australia, and nearly 12,000 miles from its main market, England, needs a peaceful world and a prosperous world to maintain its economic position. If there were no refrigerated ships or if the English market disappeared, New Zealand would be in a very precarious state indeed, for in the year 1940 nearly 88 per cent of its exports went to the United Kingdom. Is there another country with such a great proportion of its export trade going into one market?

The question might also be asked as to whether there is another country which buys such a great proportion of its goods from British countries. Since 1929 particu-

*The New Zealand pound exchanges for four-fifths of a pound sterling.

Ploughing. Mechanization of farming has advanced rapidly in the last twenty years. On sheep farms, crops are grown mainly for fattening.

Photo by F. G. Fitzgerald



The Wellington Woollen Manufacturing Co.'s mills at Petone. In the eighteen eighties New Zealand was an exporter of woollen goods. To-day her industries are invaluable for the supply of uniforms, blankets, etc. for the fighting forces.

larly, New Zealand's trade with the British Empire has been growing — at the expense of imports from foreign countries. The following table illustrates, as compared with other parts of the British Commonwealth, this predominance of British imports.

Country	Percentage of Total Imports	
	Imports of British Origin	Imports of Foreign Origin
New Zealand (1939)	74.2	25.8
Australia (1938-39)	59.6	40.4
India (1938-39)	58.1	41.9
Union of South Africa (1938)	53.0	47.0
United Kingdom (1938)	40.4	59.6
Canada (1938-39)	27.4	72.6

The word British used in the above sense covers countries in the British Empire. If goods of United Kingdom origin only are taken, New Zealand again leads as the next table shows.

	Imports of United Kingdom Origin: Per Cent of Total Imports
New Zealand (1939)	46.8
Union of South Africa (1938)	43.6
Australia (1938-39)	41.6
India (1938-39)	30.5
Canada (1938-39)	17.6

On a population basis, New Zealand is the best customer of the United Kingdom. The following table is a summary by the New Zealand Government Statistician of figures published by the British Board of Trade. All countries taking United Kingdom exports to the value of £1 sterling per head or more are included

C. G. J. Map

Countries to which consigned	Exports of United Kingdom Merchandise (per head of population) Year 1938		
	£	s	d
British countries —			
New Zealand	11	19	11
Eire	6	17	8
Australia	5	10	11
Union of South Africa	3	19	2
British West Indies	2	13	9
British Malaya	2	3	7
Canada	2	0	6
Foreign countries —			
Denmark	4	3	0
Norway	2	11	11
Sweden	1	17	3
Netherlands	1	10	3
Argentina	1	10	1
Finland	1	8	9

Orchards in the Waimea West district, Nelson, New Zealand. The apple and pear industry of New Zealand is well developed. Export fruit is high grade.

Copyright photo by A. R. Kingsford

Apart from the United Kingdom trade, what is important to New Zealand is the Pacific, and, in particular, the United States, Canada, Australia and Japan. Not only are these countries important as buyers of New Zealand goods, but they interest New Zealand too as sellers. In 1940, 47 per cent of New Zealand's imports came from the United Kingdom. In that year the United States sold New Zealand 12.4 per cent of her imports and bought 3.8 per cent of New Zealand's exports. Canada sold 5.9 per cent and bought 2.3 per cent. Australia sold 16.0 per cent and bought 2.9 per cent.

The one fact which stands out from these figures is that New Zealand buys more from the Pacific countries than she sells to them. To get the funds to do this she must depend on the sterling money which she can accumulate. That means that New Zealand must export to the United Kingdom an amount which must exceed in value the total of her imports from that country and her interest payments on account of the national debt. This has been the position for many years.

The war has brought this matter home to New Zealanders and to Canadians and Americans for that matter, for a substantial portion of New Zealand's purchases must be financed from dollars bought from London. The conservation of dollar funds in order to prosecute the war more effectively has meant that New Zealand has had to limit her imports to the barest essentials from dollar countries. Every dollar saved in imports into New Zealand means another dollar toward war equipment.

The chief items Canada buys from New Zealand are again the products of the pastoral industry — wool, sausage casings, butter, calf skins, hides. Before the war New Zealand purchases in Canada were such items as hosiery, miscellaneous apparel, boots and shoes, iron and steel bars, bolts and rods, tubes, pipes and fittings, artificers' tools, fencing wire, hardware, agricultural machinery, electrical machin-

Above: — Floating crane unloading electric railway engines at Wellington. New Zealand, for many years, has made its own railway rolling stock in extensive government workshops, but rapid modernization entailed importing.

Right:—An excellent picture of waterfront loading at Wellington for the coastal trade. Waterside work is another characteristic New Zealand occupation. New Zealand leads the world in volume of exports and imports per head.

Photo by E. T. Robson

A cold air chamber in the London stores from *The History of a New Zealand Sheep* (1893). The first successful attempt to apply refrigeration to New Zealand's exports was in 1882. Refrigeration is the secret of New Zealand's wealth.

ery, timber, paper, automobiles and trucks, and motor tires. To New Zealand, then, Canada appears as an industrial country supplying finished goods and the products of the metal and timber industries partly in exchange for raw materials from New Zealand.

In some ways imports from the United States into New Zealand are similar, but it must be remembered that Canada enjoys with New Zealand the benefit of a trade agreement within the British preference. A list of the main items will show this similarity. The United States sells to New Zealand tobacco, paints and varnishes, artificers' tools, hardware, agricultural machinery, electrical machinery and equipment, radio apparatus, timber, paper, books, automobiles, trucks, motor tires and motor spirit.*

New Zealand's trade with Australia is greater in value than that with any other British Dominion, but more of it goes toward New Zealand than from it. Discussing this subject the Government Statistician says:—"Australian industries have advanced under the stimuli of a depreciated currency and tariff protection to the stage where they can compete effectively in the New Zealand market with the manufactured products of the older countries. The comparative nearness of Australia to New Zealand is a very strong factor operating to the benefit of Australian firms in the New Zealand import market, the closeness of personal contact possible between importers and the Australian manufacturers, the short period in which goods can be delivered after ordering, and the intimate knowledge of New Zealand requirements, all acting strongly to the mutual advantage of the Australian exporter and the New Zealand buyer. Moreover, the New Zealand market presents a very strong attraction to Australian firms, since the potential demand in this country is of sufficient size to represent a very profitable addition to the home market."

Iron and steel are probably New Zealand's most extensive purchase in Australia, particularly in bar bolt and rod where the amount bought far exceeds that taken from the United Kingdom. Other goods bought by New Zealand from Australia are fresh and dried fruits, paints and varnishes, fencing wire, hardware, electrical equipment, hardwood timber, glassware, books and papers. Australia in turn takes from New Zealand cross-bred wool, gold, hides, fish, softwood timber, grass and clover seeds. Here again, New Zealand is seen as an exporter of primary products.

For a small country New Zealand is a big overseas seller, and, on occasions such as the depression of the 'thirties, New Zealand's dependence on the outside market and the prices in that market for meat, dairy produce and wool was made very definite. In that period prices fell

*Because of the import selection and dollar conservation policy imports of United States goods have shrunk considerably.

Fat cattle on a New Zealand farm. Grass grows all the year round in New Zealand. There is no need to house stock in the winter. In recent years New Zealand has successfully entered the chilled beef trade. Photo by M. Hall Raine

Droving sheep in the North Island. New Zealand's sheep farming is specialized into hill country for ewes and wool, low country for fattening meat. This and the killing season mean constant movement of stock on New Zealand's country roads.

over 40 per cent which meant not only great hardship for New Zealand farmers but reduced purchasing power for the whole Dominion and, of course, reduced imports from all countries. The unbalanced and delicate nature of New Zealand's economy, depending as it does on the purchasing power mainly of the British working man, to whom two or three products of New Zealand's grasslands are sold, has, for many years, been the object of some concern to New Zealand economists and public men.

In 1938 New Zealand adopted a new policy in regard to her overseas trade. For many years she has placed the United Kingdom first in her trade relations, countries of the British Commonwealth second, and other countries third. The new scheme of import selection maintained this order, but was so designed as to increase the United Kingdom's share of the total import trade but somewhat to alter the type of goods imported. In effect, New Zealand was no longer leaving the disposal of her foreign exchange to the ordinary demands of finance and commerce, but from December 1938 used the Customs Department and the Reserve Bank to license imports and to allocate foreign funds to certain uses in accordance with government policy. This policy was directed to ensuring that payments on account of New Zealand's debt service were met, that raw material supplies for

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(1) A typical New Zealand dairy factory. New Zealand butter and cheese factories are co-operatively owned by surrounding farmers within zoned areas. Motor trucks collect cream from farms. High quality and efficiency are key-notes. New Zealand possesses the largest dairy factory in the world.

(2) Interior of a New Zealand butter factory. Note the huge churns and the extent of mechanization.

(3) A busy time in a Nelson apple orchard. In this district apple trees bear heavily. The war has cut up the main English market for apples and pears. New Zealand Government has bought whole crops for resale in domestic market. Losses are borne nationally. New Zealand school children receive an apple free every school day in addition to the half pint of milk which is also free.

(4) Shipping wool and tallow, Wellington. Both of these are products of the sheep industry. The wording on the tallow casks shows that the destination is Glasgow.

Photo by E. T. Robson

Top left:—A huge gold dredge in the South Island of New Zealand. This dredge treats millions of tons of gravel to get ounces of gold. As with other industries, mechanization is the key-note.

Top right:—New dredge on Molyneux River. Power is obtained from a hydro-electric station twenty miles away. New Zealand is world-famous for her gold dredges.

Photo by E. A. Phillips

both primary and secondary industries were first of all made available, that the import trade was directed more to the United Kingdom, and to adjusting other imports in accordance with the foreign funds available and the possibility of New Zealand production of the items in question.

Though New Zealand has no export trade of great dimensions in industrial products, it has a fairly diversified, though not heavy, industrial structure. The good times that New Zealand experienced from 1936 onward saw the establishment of many new domestic industries. Government policy itself, particularly that relating to the import selection programme, has encouraged further expansion, which means that New Zealand will more and more be supplying her own needs in light finished goods, though the raw materials in many cases have to be imported.

Owing to the nature of the country, its population and its geography, New Zealand industrial units have been small and scattered. Within these limits they have shown efficiency, and particularly in the last three or four years New Zealand has shown that as far as quality is concerned its goods can be equal to similar lines produced elsewhere.

(1) A cable jointer splicing wires for underground transmission. New Zealand had a telegraph system under way in 1867. Telephones and telegraph are government owned.

Courtesy Post and Telegraph Dept.

(2) A public works camp in Central Otago in the South Island. Public works are very necessary in New Zealand; the mountain chains mean tunnels, the rivers running at right angles to lines of communication mean many bridges. Without roads and railways New Zealand would not have expanded its farm production so rapidly.

Within the past year or two more new industries have been established, and at the present time New Zealand is producing a wide variety of manufactured lines. The following examples illustrate this variety: tennis shoes, fibrous plaster, corsets, nails, cosmetics, nuts and bolts, pharmaceutical preparations, batteries, lacquers, soap, carpets, cigarette papers, washing machines, sports goods, electro-plated ware, hats, brushes.

In addition, New Zealand has many industries of long standing which have recently expanded considerably. For example, the engineering industry has expanded to include electric wringers, washing boilers, electric welders, and electric lift apparatus. The clothing trade has benefited more than any other from the import selection policy and is turning out highly popular styled goods. New Zealand for many years has been expert in making agricultural and dairy machinery, and, to meet the needs of the primary industries, is making an increasing number of milking machines, seed cleaners, drills, hay rakes and other similar equipment. The woollen industry is also expanding, as is range-making and electrical engineering.

New Zealand has made a small beginning in the export of manufactured goods particularly to the Pacific Islands — to such places as Samoa, Tonga and Fiji. Australia, despite its high tariff, has also taken small quantities of New Zealand manufactures. The following items have appeared as exports in the New Zealand statistics — radio sets, agricultural implements, dairying machinery, mining and dredging machinery, fertilizer, casein, soap, sports goods, infants' foods. Except for radio sets, all these items are related to New Zealand's farming or extractive industries.

The war has meant an extension of operations in boots and shoes, clothing, processing food products and engineering. It has also brought to New Zealand a problem of shipping the millions of carcasses of meat and millions of pounds of butter and cheese produced annually for England. This is the present problem, and not one that applies to New Zealand alone. When the war is won, New Zealand will face a new problem — what is to be done about its specialized economy. That is, shall its efforts and its exports be based on grass alone, or should it plan alternatives?

A New Zealand passenger plane. Chief feature of air travel in New Zealand is safety. New Zealanders are world-renowned for their ability as pilots.
Photo by E. T. Robson

Below:—The *Orion* berthing at Wellington. Note the extensive cranes for Wellington's export and import work.

Bottom right:—The *Strathallan* lying at the Wellington wharves. Wellington harbour and wharves can take the world's biggest ships.

Moscow, post-revolutionary capital of Russia. View of the Bolshoi Ploschod (Grand Theatre Square) in the centre of the city. The high white building on the left is the famous Bolshoi or Grand Theatre, formerly the Imperial Ballet Theatre, where the greatest ballet and opera stars of the U.S.S.R. appear on alternate nights. Several of Moscow's foremost hotels stand in the Square.

The Red Square showing Lenin's mausoleum against the formerly red but now white walls of the historic Kremlin with St. Basil's Cathedral in the background. The Red Square is used to-day for military reviews when Joseph Stalin and his ministers review their troops from the top of the mausoleum which serves as a rostrum. Fifty thousand Russian youths are assembled in this picture on the occasion of one of the All-Union sports days.

My Impressions of the U.S.S.R.*

by CARLETON J. KETCHUM

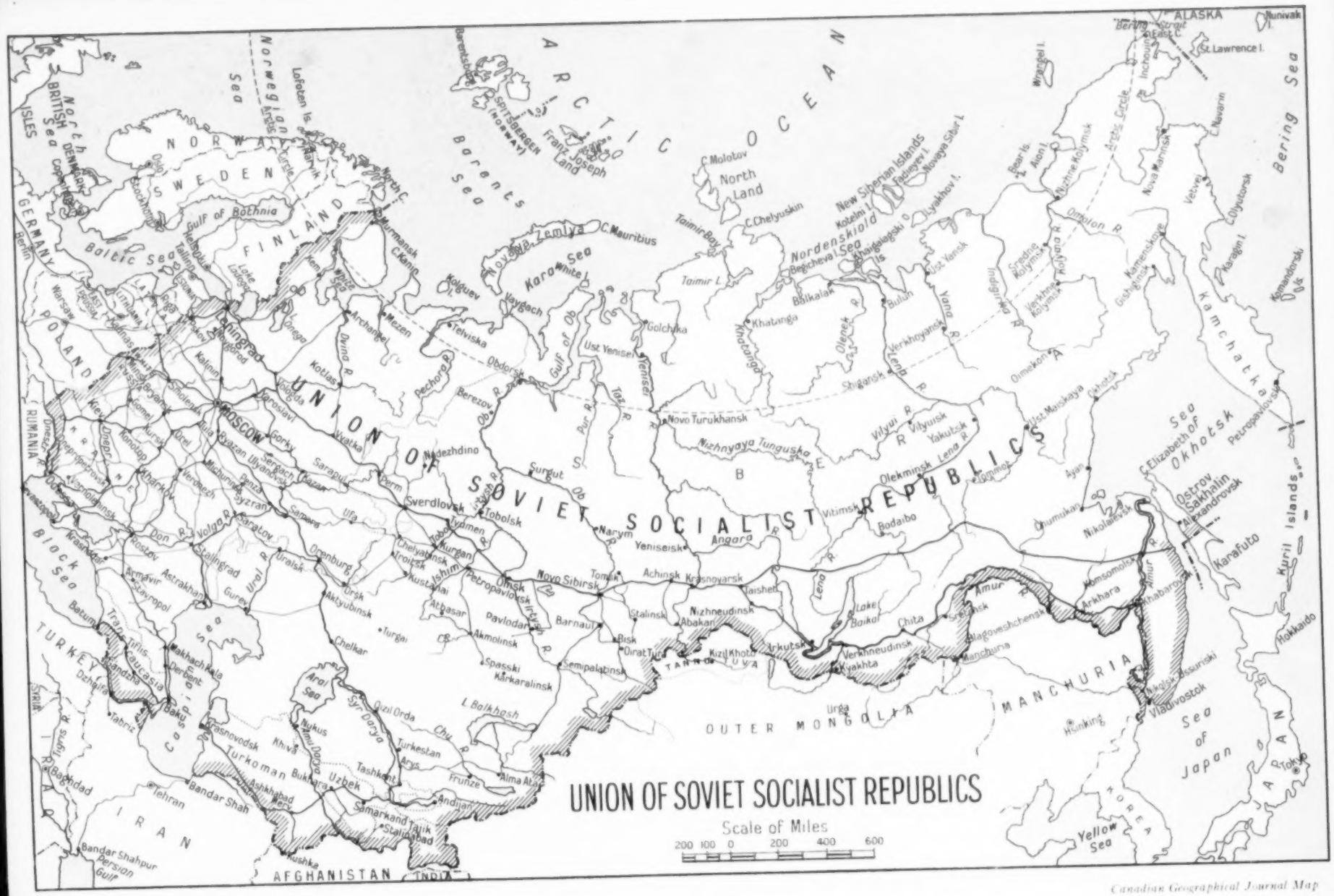
THE Union of Soviet Socialist Republics, stretching across two continents from the North Pacific Ocean to the Gulf of Finland, covers more than eight million square miles, or one-sixth of the earth's surface, and is, in area, the largest single political unit in the world. The census of 1939 placed the Union's total population at a figure just under 180,000,000.

Russia, by the terms of the Union's Constitution is divided, for purposes of government, into eleven self-governing republics and various additional self-governing regions. Each republic or region has its separate government for local affairs, patterned on the federal Union government at Moscow, but functioning much in the manner of a provincial government in Canada or one of the state governments in the United States.

The supreme organ of state power in the Union is the Supreme Soviet of the U.S.S.R. which replaced the All-Union Congress of the Soviets under the terms of the 1938 Constitution; the last Constitution evolved by the Union for the government of its people. The Supreme Soviet assembles twice a year and is elected in the first instance for a four-year term. It consists of two legislative chambers, each vested with supreme but equal rights, and is composed of 600 delegates from all quarters of the Union, each delegate representing 300,000 constituents. Delegates to-day are elected under the universal suffrage system with the secret ballot.

The two chambers meet in joint session to elect a Presidium consisting of a President and eleven vice-presidents, each of whom represents an individual republic within the Union, and twenty-four mem-

*Photos courtesy Sovfoto, New York City



Canadian Geographical Journal Map

bers who become Commissars or Ministers. This body might appropriately be termed the Federal Cabinet of Russia, for it supervises the work of the Council of People's Commissars selected by the Supreme Soviet which is, in fact, the executive and administrative organ of the State. The Presidium, in conjunction with the Council of People's Commissars, exercises almost complete authority in the control of the affairs of the Union between the meetings of the Supreme Soviet. Portfolios in the national or federal "cabinet" or commissariats are divided more or less as follows: defence, foreign affairs, foreign trade, railways, water transport, communications, sea transport, ferrous metallurgy and non-ferrous metallurgy, chemical industry, aviation, shipbuilding, armaments, munitions, heavy machine-building, medium machine-building and general machine-building, navy preparement, coal industry, fuel industry. Additional commissars become *ipso facto* members of the Council of People's Commissars once they have become Chairmen of: the State Planning Commission, the Soviet Control Committee, State Committees on Art, Higher Education, Radio Broadcasting and Radioeducation and the Cinema Industry. The Nazi invasion has resulted in some consolidation of power.

The highest judicial body of the Soviet Union to-day is the Supreme Court which, like the Special Courts corresponding to Divisional Courts elsewhere, is elected for a five-year term.

The Communist Party is the only legalized political organization in the Soviet Union. It consists of between 2,000,000 and 3,000,000 members who practise a rigid code of self-discipline in the interests of the party and of the state. The party's directive body is the Central Committee elected by the membership at the annual party congresses held in Moscow. The committee elects a small executive body, the Political Bureau, which, by virtue of its position of party leadership, makes decisions on policy which are followed by the Union Government.

Joseph Stalin is General Secretary of the Communist Party of the U.S.S.R. The fact that he holds that important key position in addition to his place as a Deputy of the Supreme Soviet, member of the Military Council of the Supreme Soviet and Chairman of the Council of People's Commissars, explains the power that he wields in the affairs of Russia to-day. Yet, in my view, he is not in any true sense a dictator, although the General Principles of the Constitution in the original Soviet Constitution passed in July of 1918 uses the phrase "dictatorship" in outlining its aims, which were:

"To secure by the establishment of a strong Soviet Government a dictatorship of the urban and rural workers combined with the poorer peasantry; to secure the complete suppression of the *bourgeoisie*, the abolition of exploitation of man by man and the establishment of socialism under which neither class divisions nor state coercion arising therefrom will any longer exist.

"The Russian Republic or Union is a free Socialist community of all the workers of Russia," continued this manifesto or temporary Constitution. "All authority within the Russian Union or Republic is vested in the entire working population of the country organized in the urban and rural Soviets.

"At the same time, striving to bring about the really free and voluntary and, therefore, the complete and lasting union of the working classes of all the various nationalities of Russia (there were 150 nationality divisions in Russia before the

Joseph Stalin, General Secretary of the Communist Party of the U.S.S.R., Deputy of the Supreme Soviet, Member of the Military Council of the Supreme Soviet, and Chairman of the Council of People's Commissars — most powerful political figure in Russia since the death of Lenin.

Scenes in a day nursery where the working mother of modern Russia may leave her child for the day while she carries on her work at the factory.

revolution), the Third All-Russian Congress of the Soviets confines itself to formulating the main principles of the federation of the Soviet Republics of Russia, leaving to the workers and peasants of each nationality the right to decide freely, at their own national Congress of Soviets, whether they desire, and upon what basis they desire, to participate in the Federal Government and in other Soviet institutions."

This principle still applied in Moscow at the outbreak of hostilities. A Council of Nationalities, which is one of the two upper chambers of legislative bodies of the Supreme Soviet, safeguards the interests of peoples of all nationalities in this respect and deprives Stalin and others of the Kremlin administrative hierarchy of dictatorial or supreme dictatorial powers which otherwise they would enjoy. Moreover, the word "soviet" was carefully chosen in the Russian revolution and adopted in all constitutions since to denote an antithesis to the word "dictatorship". Translated literally into English it means "council". Russia, therefore, is administered to-day under a system of "council government" or "government by council". So I hold that Stalin is not to-day and never has been a dictator in the sense that Mussolini has been dictator of Italy, Mustapha Kemal Pasha of Turkey and Hitler of Nazi Germany. He possesses and, indeed, exercises wide personal power, but no major decision or decision of major state importance can be taken under his direction or with his agreement without the endorsement of the supreme governing organ of the state, the Supreme Soviet which meets, as I have stated, twice yearly. Stalin is in peace-time only a Deputy of that supreme federal body; one of six hundred deputies.

According to the various constitutions of Russia, the land and general resources of the Union's territory are held in trust by the Federal Government for the general population. There is no private ownership of land, although collective farms may, under the terms of the last constitution, hold their land now under a system of perpetual leasehold.

Natural resources are exploited by state trusts. The transport system as well as posts, telegraphs and telephone services are operated as government departments. Industry is conducted almost entirely by state enterprise, the output of private industries having declined in recent years—since the period of the New Economic Policy under which it flourished for a time—to a fraction of one per cent of the total industrial production of the Union.

Education is a federal responsibility. Compulsory education for all children of the Union was originally established at a period of four years, but, in the last Constitution, was extended to seven years. This means that every child born into the Soviet Union to-day is under legal obligation to attend school for at least seven years. This is one of the many worthwhile reforms wrought by the revolution before which, and for generations, millions of Russians grew to adult age, and, indeed, lived from the cradle to the grave, without being able to read or write; many millions more, because they were not taught to or encouraged to speak each other's languages were unable to speak to one another although families so situated spent a whole lifetime living upon opposite sides of the same street. This too is different to-day, for the Supreme Soviet has standardized the use of the Russian language.

Military service in Russia and throughout the Union is accepted as another federal responsibility and is compulsory. It applies to all youths reaching the age of 19, or in the case of those graduated from

high school, 18. This means that since the revolution — for this law was passed in the earliest constitutions — every youth in Russia has seen some form of military training or service. Also, having attended school for at least seven years, he does not enter the army with the same handicaps as were associated with the masses in the Russian "steam-rollers" under the Czars.

The Russian hall of learning by which I mean the institution of learning or study, whether it be the kindergarten or even the *crèche*, where the Russian mother employed in a factory may leave her child for the day, while she goes to work, is, of course, entirely under state control. Naturally, therefore, the curriculum is rigidly organized and imposed by the state. Russian professors have told me, however, that, with the passing of each succeeding constitution, new concessions have been made to the freedom of man's mind in the matter of the subjects he may study and understand or enjoy. In two or three respects, however, the teaching is restricted. Religion, for example, is banned or, rather, its teaching banned. This is so because under the terms of the provisional constitution passed in July, 1918, there was enacted a provision, confirmed in every constitution since, that: "In order to ensure for the workers genuine liberty of conscience, the church is separate from the state and the school from the church; *and freedom of religious* and anti-religious propaganda is assured to every citizen".

Thus the Russian student or pupil is not taught religion or its meaning in any state school, although under the terms of the constitution, there is nothing whatsoever to prevent his gaining knowledge of the subject in his home or elsewhere outside the school room.

For many years there existed in Russia a powerful independent semi-political body known as the Militant Atheist Society. It published a weekly magazine about the size of the *Saturday Evening Post* which achieved a similar popularity and circulation as the years passed. This publication boasted of an editorial board composed of some of the most outstanding writers in all Russia. Its caricatures and art reproductions showed at once that many noted Russian artists were entirely in sympathy with its aims and objects.

The principal aim of the Militant Atheist Society which claimed to have a paid-up following of 5,000,000 members working in every town, city and village and in every factory and on every farm in the Union, was not to overthrow anything or any established institution by force, but, by intensive and intelligent educational and propaganda campaigns, to convince Russia's toiling millions that religion was an empty shibboleth: a hoax, a delusion and a snare.

"Religion is the opiate of the people!" That was the slogan adopted by the Militant Atheist Society of all or Greater Russia. It was proclaimed in letters of fire from thirty-foot high bill-boards in every city and town in the Union. Bare-headed, long-bearded old men, fanatical women with children in their arms, stood on street corners and shouted the words to pedestrians as they passed on their way to their factories, to their workshops or their offices. Groups of workers of the society — militant workers — stood outside churches as those more sympathetic to that age-old institution sought to gain entrance to attend services in the period when both the Greek Orthodox and the Roman Catholic Churches were engaged in their last grim struggle for existence with the supreme state authority. I attended

Children's clubs are part and parcel of the social arrangement in Russian cities and towns to-day. Children working with microscopes (left); young pioneers in the classroom (below).

Klementi Voroshilov, a Marshal of the Soviet Union, Vice-chairman of the Council of People's Commissars, former Commissar of War and organizer of the present Red Army. This portrait was painted by one of Russia's foremost present-day portrait painters for presentation to him on his birthday.

the trials of many of the leading prelates of the Union: Patriarch Tikhon, Patriarch of all the Russias, of the Greek Orthodox Church, Budkevitch who was shot for "counter-revolutionary" activities and Monsignor Tzepliak, the Polish-born Roman Catholic Primate of all Russia at that time, who, though sentenced to death, was later released on the intervention of Mussolini when he concluded a Trade Pact with Russia, and permitted, after his sentence had been commuted to two years in prison in Moscow, to return to Rome.

The trials of those church leaders attracted world-wide attention at the time. They were sensational in character due to the nature of much of the evidence. They revealed for one thing how inextricably the churches had become bound up with government under the Czarist regime. That was the fundamental or one of the fundamental reasons for their liquidation by the Soviet. They aligned themselves with the advent of the revolution unreservedly on the side of the forces opposed to the new order. They did not stand aside and counsel neutrality or calmness or non-aggression on the part of their followers, but, according to the testimony of the various trials I attended, they adopted a militant stand; they counselled their people to fight, and they themselves fought with an astounding tenacity. Stories were related in harrowing detail how priests, Greek Orthodox and Roman Catholic alike, barricaded themselves for a last stand in their church buildings only to perish at the point of Red bayonets or end their days in the confinement of a prison cell.

The attitude of Moscow toward religion has materially altered with the passing of the years since the days of the historic trials to which I have referred. The *Bezschbozschnik*, or *The Atheist*, the magazine which served as the official organ of the Militant Atheist Society, has long since ceased publication. When I toured the whole of European Russia, travelling from Moscow down the Volga River to the Caspian and Black Sea coasts a few summers ago, I was surprised at the number of churches functioning and the number of black-bearded, grey-cassocked Greek Orthodox priests I encountered everywhere I went. When the day which corresponds to Sunday on the western calendar — which no longer exists in Russia — came round one noticed little groups of town and village folk making their way nonchalantly to the little town or village church which they, and their families before them, have probably attended for generations. There was no apparent interference with them. They did not attend during working hours but in the early morning before going to the factory or their workshop.

Probably hundreds of churches throughout Russia have disappeared since the revolution. Many have been converted into museums; others have been razed to make way for new buildings. Moscow in the old days was known and famous throughout the world as the city or capital of forty-times-forty churches. It probably had that many churches — sixteen hundred. Many of them, as for example, the St. Basil's Cathedral which stands a hundred yards or so from Lenin's mausoleum in the heart of the Red Square, are still there. St. Basil's Cathedral was built in the time of Ivan the Terrible and at his direction. Its multicoloured cupulos are one of the most colourful features of one of the most historic public squares in the world.

When I asked a high Russian-communist official on an occasion a few years

ago what eventually would, in his opinion, serve in Russia as a substitute for a religious faith upon which Russian people had been nurtured through the ages, he replied:

"Mr. Ketchum, if you will examine carefully and without prejudice the theology of Russian communism you will agree, I feel certain, that we will in time present to our people a satisfactory substitute for the thing they accepted as religion under the Czar."

For this reason, perhaps, Russia has sought to deify Lenin. That revolutionary leader to-day lies embalmed, in life-like form, in a glass casket in a massive red-stone mausoleum in the centre of the Red Square. He lies there for all the world and his wife to go to see. One time or another since the revolution men and women workers from every part of Soviet Russia have gone there, their travelling expenses borne by the state, simply to spend the allotted maximum of two minutes before the casket, guarded day and night by four Red Army sentries with fixed bayonets standing rigidly at attention. They stand, gaze into the bearded yellow face of Lenin, attired in the plain uniform of an ordinary soldier of the Red Army, adorned only with the single decoration, the Soviet Order of Merit, and pass on. Garish yellow lights play down from hidden crevices of this deep-under-the-earth tomb reached by dark labyrinthine passages. The scene and the atmosphere create a strong sense of the eerie. To such an extent does it affect the emotions that the story is told, not without a modicum of truth, of two elderly American tourist ladies who came all the way from Tennessee or Arkansas or Alabama, to see for themselves what the much-talked-of present-day Russia was like. On the day of their arrival in Moscow their Russian woman guide led them to Lenin's mausoleum. They saw what there was to see and emerging in a drizzle of rain to the surface of the wide Red Square they were both in tears. Said one to the other: "Isn't it just dreadful, Katie? Isn't it?" "Yes, Jennie, just terrible; too terrible for words. And what did you say his name was?"

Classes and, to a high degree, sexes, have been equalized in Russia. If a new intelligentsia develops, it will be the artists of Russia, the dancers of the State Ballet Theatre, stars of the Moscow Opera House, and outstanding painters, who will be responsible. They adopted the slogan some years ago that "you may lead a horse to water but you cannot make him drink!", and have thereby contrived to secure far-reaching concessions. Hence to-day really outstanding artists, opera stars, ballet dancers and others whose individual personalities and talents are recognized as being of great value to the state for propaganda or other reasons, are accorded generous concessions in the matter of housing accommodation. They are given, for example, long leases—unusually long leases — on the exclusive use of apartments which, in the case of the ordinary worker, would be divided up for the housing of several families.

The bonus system of payment for work done applies everywhere in the Union to-day. At one time every man and woman, whether he was a manual labourer, or one of the "white collar" categories of state employees, received practically the same wage. There was no differentiation. All men—and women—were equal. But the inevitable happened. The Soviet authority discovered that it was almost impossible to compel able men to produce their best work without some inducement, financial or otherwise. They began by offering housing concessions, longer holidays to the man in the factory who did the best work in his department in the

A Red Army lieutenant

year, promotion to easier work. All these concessions helped but they did not solve the problem. Then Moscow struck upon a new idea. They agreed upon a system of bonuses which to-day is universal throughout the Union. The system applied to the factories, to the collective farmlands, in the artists' studios and on the stages of the ballet and the theatre. Every man and woman in the Union is paid a basic wage as a matter of the state's initial obligation, but under the new system every man and woman is also eligible for bonus payments if his or her work is worthy of that consideration.

Hence you will pick up your morning *Pravda* or *Isvestia* — two of the official organs published as the leading daily newspapers in Moscow — and you will read of great state loans or lotteries being organized by the State Bank in which every worker is invited to participate.

For, strange as it may seem to the average reader, there are banks and bankers in the Union of Soviet Socialist Republics. There is also a money or currency system similar to that prevailing in Canada and in most of the countries of the world, save that in Russia the people deal only in an internal paper currency, the export and import of which is prohibited. The paper rouble used only in Russia is given an official valuation by the Kremlin's Commissariat of Finance from time to time. The last valuation placed upon it, two or three years ago, was one rouble to three French francs or five roubles to the American dollar. That would be about its value to-day unless the war has already forced a depreciation of it.

Russia's considerable payments abroad for materials in connection with her various Five Year Plans, the first of which was launched in 1928, have been made in gold. Gold production has increased rapidly in recent years until to-day the Union is believed by experts to be second among the nations of the world in gold production. No official figure of actual gold production in Russia has ever been revealed to the outside world, but the fact that the country has forged ahead to a top-ranking place in the production of this metal is vouched for by world-recognized financial authorities.

Russia's toiling millions are, of course, paid in cash by their factories and their co-operatives as are workers in other parts of the world. That was not always the case. I have spent winters in Moscow when the majority of workers received only goods roubles for their labour; goods roubles negotiable only for merchandise. There were no bank accounts then; no savings, and luxuries were almost unknown.

How different it is to-day! At the outbreak of war, there were probably not 100,000 unemployed persons in the whole of the Soviet Union of 180,000,000 citizens. That was so because the State had impressed its total available labour into its service; a system which, incidentally, does not appeal to me. I recall a winter spent in Moscow in the late twenties when between fifteen and twenty million Russian people were out of work. Occupations could not be found for them. Before labour exchanges in every city in the Union vast throngs of poorly-clad, half-starved, sad-faced people waited, hour after hour, day after day, week after week, and late into the night, even in the heart or depth of this Russian winter, waiting for jobs and for food which never came. They went to the labour exchanges in those days and stated their qualifications and experience. If a man was an experienced carpenter or blacksmith or electrician or a woman a cook, a stenographer, an experienced secretary, those facts were stated. The applicant was registered for the work for which he was qualified. If, upon looking through his lists, the labour exchange chief did not discover an opening, his reply to the applicant's requests for a job was invariably that he would have to return on the morrow. He or she would have to wait until openings developed for persons equipped with those particular talents.

But one fine day Stalin stalked into his small suite of offices behind the formerly red, but now white, walls of the historic Kremlin, and after consultation with some of his colleagues changed all this, subject, of course, to the approval which he would receive at the ensuing congress of the Supreme Soviet. He worked out a plan to absorb every man and woman in work at once. To make a success of it he launched a campaign throughout the Union.

"He who would live must labour; he who would idle must perish!" Those were Stalin's words used subsequently when he addressed the All Union Congress of the Soviets. The words travelled through the Union like a whisper on the wind. Their portent was not at first understood. They were not understood particularly by those millions who were then working loyally,

Krasnaya Ploschad or Red Square. Close-up view of Lenin's massive red marble mausoleum wherein the late leader of the Russian revolution lies embalmed in life-like form in a glass casket.

hard and oftentimes late into the night to ensure that the first and the second of the Five Year Plans should succeed. But they were understood soon by the fifteen or twenty millions then without work or without prospect of work.

Under this edict an unemployed bricklayer for whom no post was available was told that if he would report himself to such-and-such a place, the state would in a month's time make him a first-class stone-mason or carpenter and employ him on the spot. If a woman sought work as an interpreter or guide for a tourist bureau because she was a university graduate speaking several languages, she was promptly told that if work could not be found for her in that particular category, she was to report to a certain hotel, where she would be trained and employed until an opening occurred suitable for her special talents.

That is how the system worked. It worked so well that within a few months there were probably not 100,000 persons without some form of employment in the whole Union. It is impressed labour. That is why I and many with whom I have discussed the subject, including noted labour leaders in Canada and elsewhere, do not like it. Yet in Russia the system has worked successfully, and, probably as a consequence of its measure of success, will be incorporated as part and parcel of the labour-employment system in the years to come.

Russian leaders declare, of course, that under this system the load has been lightened for those already working, but they admit widespread duplication of effort. That is true. It is a common experience to walk into a hotel, and notice four or five porters clustered round in a group beside a loafing concierge or two and all with little or nothing to do. I have stayed at a leading hotel in Moscow where because of this new or impressed labour system

four or five clerks stood behind a desk when only one was necessary. All they seemed to do most of the day was twiddle their thumbs or scribble useless notes on slips of paper to make an appearance of being busy.

Russia has tried other experiments in the sphere of labour employment to increase employment, to solve unemployment problems or to increase production. Some have succeeded; others failed. The Union long ago adopted the five-day working week. The worker rests on the sixth day which in Russia is universally called Rest Day. He may go to the theatre, to the great State Ballet Theatre, to the opera, to the cinema, and he may go in the morning of Rest Day, for most theatres are opened all day long on Rest Day entirely for the benefit of the workers. Free tickets entitle the holders to the best seats, even the great plush-upholstered boxes used by the nobles and aristocracy in the old days, which are packed with workers, their wives and children on these Rest days, as well, of course, as on other days of the week. You will see them in their ordinary working clothes seated in these spacious boxes which rise tier on tier into space in the great Moscow State Ballet Theatre, applauding with sincere appreciation as the great stars of Russia dance and sing for them with all the energy, the verve, the apparent enthusiasm and delight they displayed in early days when their audiences were largely composed of grand dukes and millionaires who knew how to express appreciation in terms more tangible than applause.

Vast sports festivals are a feature of everyday Russian life in city and country alike. Soviet youth has been organized. The young—very young—have been impressed into the so-called Young Pioneers' Movement with the consequence that several millions of youngsters, both girls and boys, go hiking whenever the weather permits. They are attired in uniforms somewhat similar to those worn by the Boy Scouts and Girl Guides of America. They go camping, to the seaside, in the warm summer months, and in winter foregather in their club halls or rooms where they are entertained or instructed by lecturers, given concert parties or encour-

Soviet industry. Sheet rolling department of a Russian steel mill (top). Interior of one of the principal iron and steel plants of the Soviet Union (left).

Latest model of Soviet locomotive, the streamlined 2-3-2 turned out by the Kolomensky machine building plant at Kolomna.

Coke and chemical plant at Magnitogorsk under full steam

aged to dance, play games and generally show a spirit of free and easy comradeship.

Their elders play too, for Russia is a land, more so perhaps to-day than ever before, inordinately fond of amusement. The average Russian citizen, whether man or woman, lives for love, life and laughter. They are an extremely hospitable people, passionately fond of music and everything to do with the theatre. They are humorous to a degree, and will sit up all night over glasses of tea and sometimes over glasses of Russian beer or Russian champagne—which are staple commodities now—exchanging anecdotes. The radio has been a great boon to them, and every Russian has access to a radio, if not in his small, state-owned apartment or room, at least in his communal dining-hall, his club. No national territory in the world has exploited the radio and radio broadcasting for general purposes as Russia has done, and has been doing for years. Consequently, you will see any night in Moscow and in every city in the Union large crowds gathered at the principal street intersections. They may be there listening to a rendition of *Carmen* or *Aida* by some of the Soviet's greatest opera stars, because they have not been able to secure tickets to go to the opera itself. Or they may be there listening to Joseph Stalin's explanation of the latest strategical move taken by the Kremlin in the war now being waged upon Russia by the Germany which they knew would seek to invade their territories sooner or later.

If Russia is well trained for war to-day and has a potential if not standing army of between 20,000,000 and 40,000,000 men, it is not because the Russian people themselves are a war-mongering or land-hungry people. They have trained themselves because apprehension of invasion became a nightmare with them as far back in their post-revolutionary history as 1922-23 when first I visited Moscow as the Special Correspondent of the *London Daily Express*.

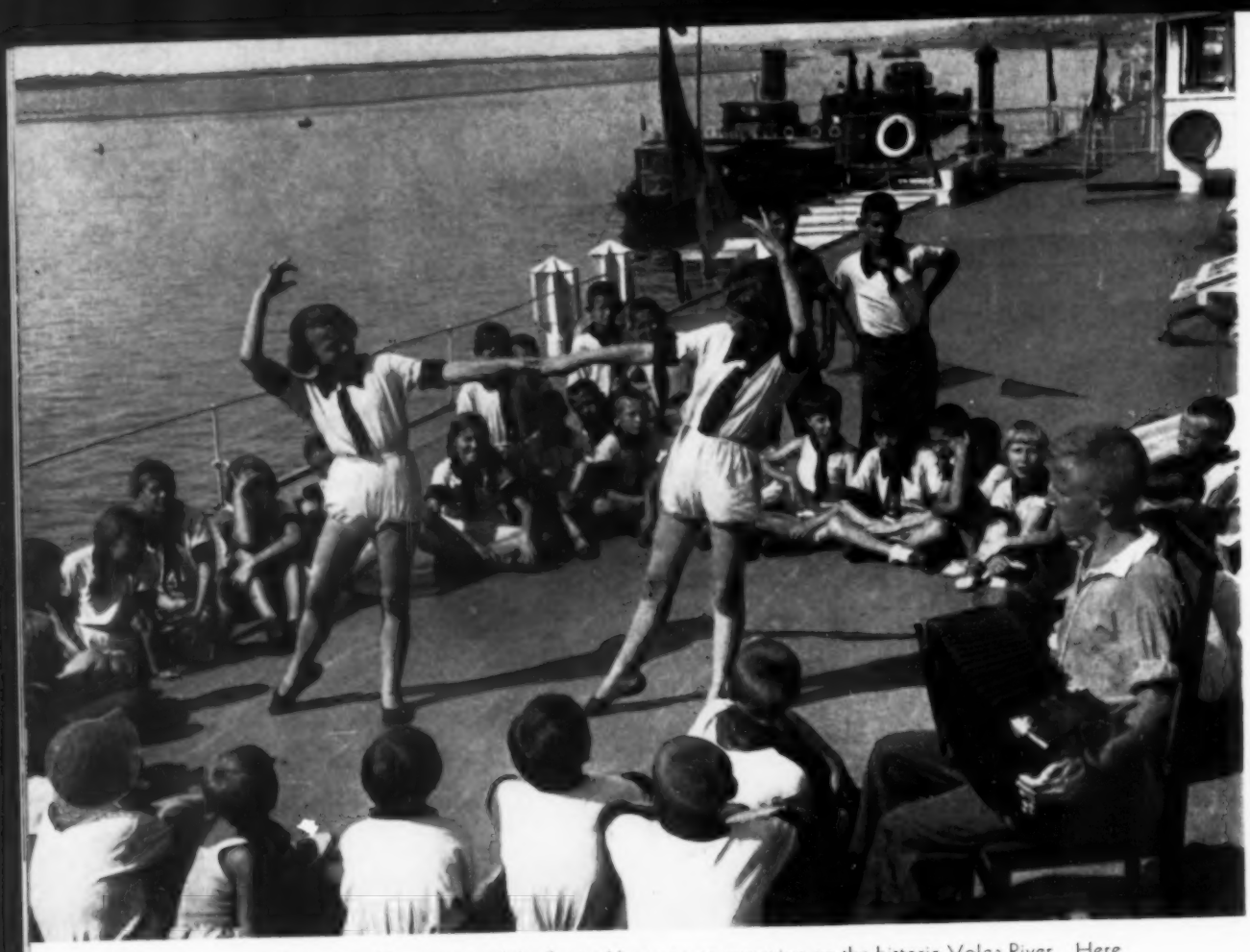
"Socialism in our country in our time!" was a slogan used by Stalin in a public address to which I listened in the Red Square on the occasion of a May Day

At top:—Street scene in Kharkov, capital of the Ukraine

Left:—Young woman collective farmer of the "Aurora" Collective Farm in the Chuvas Republic of the U.S.S.R. analysing wheat seeds in the farm's laboratory.

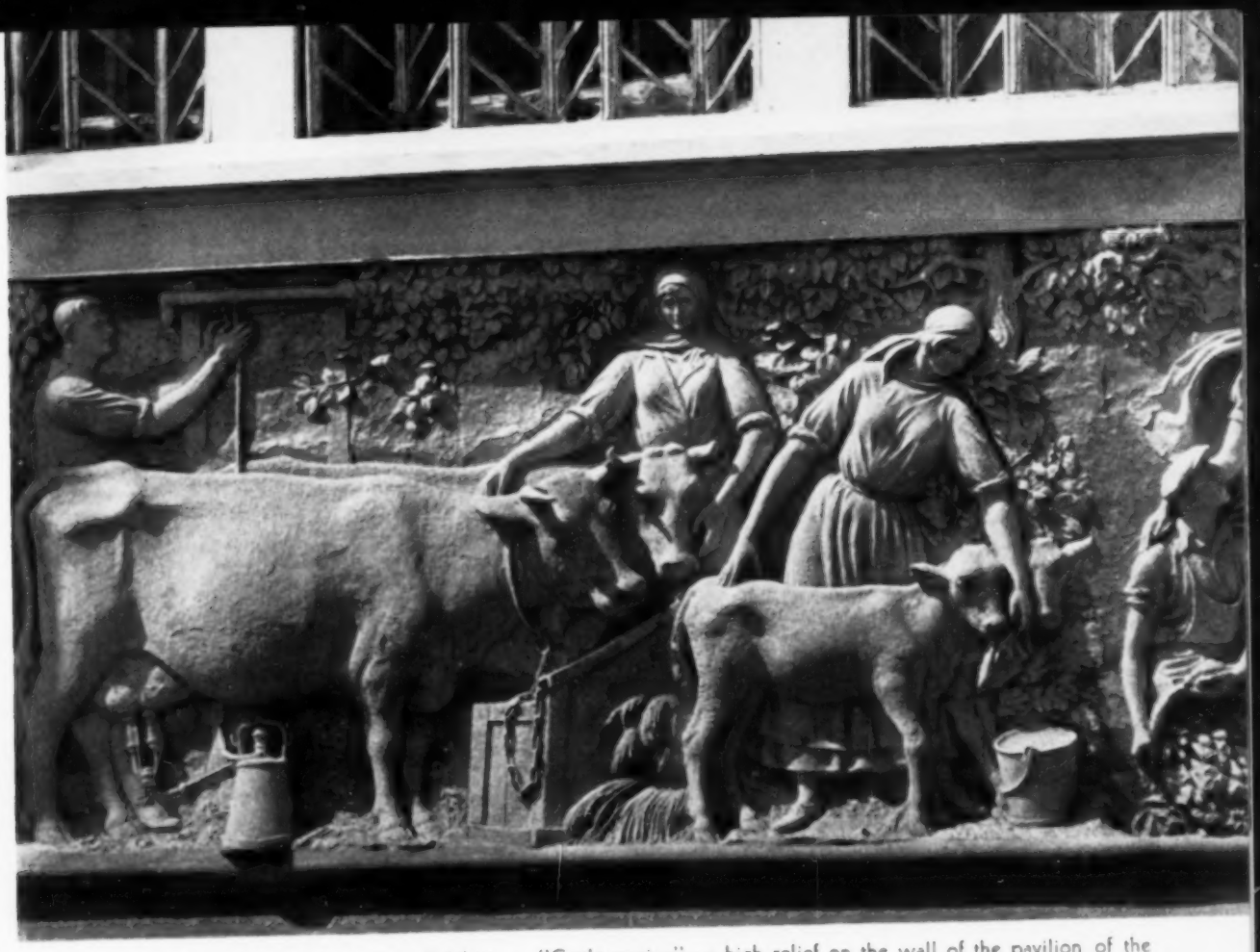
procession a few years ago. He was addressing 50,000 uniformed troops assembled on parade in the Red Square. Beside him stood the then Commissar of Defence or War, the able Voroshiloff, and other chief leaders of the Kremlin. It was about that time that Russia formally abandoned the dictum of Lenin which called for a simultaneous world revolution before concentrating on development for stability and prosperity within Russia itself. Russia has thus become a self-sustaining or self-sufficient national unit. Even if all the countries in the world were to combine against her with naval and other blockades, she would, I believe, survive for years because of her almost unlimited natural and material resources. She has 180,000,000 people to feed, but wisely, if not very shrewdly, she has built up an industrial machine capable of feeding them adequately. Her army is potentially strong and, I venture to predict, capable of enduring opposition for a long time no matter how powerful or how determined the foe. For be it remembered that in the war of 1914-18 Russia placed 12,000,000 men in the field in the three and a half years she remained at war. Germany time and again hurled her armoured hordes against the Russian "steam-roller" yet not once did the Hun succeed in breaking through the Russian lines. History repeats itself and that I feel, as a writer who has spent five winters in the land of the Soviet since the winter of 1922-23, is what will happen again. Germany may pound and hammer away at Russia's western ramparts, but she will hammer and pound, in the opinion of this writer, without ultimate avail.

An aggregate of combines in Russia being operated under the supervision of a combine operator.



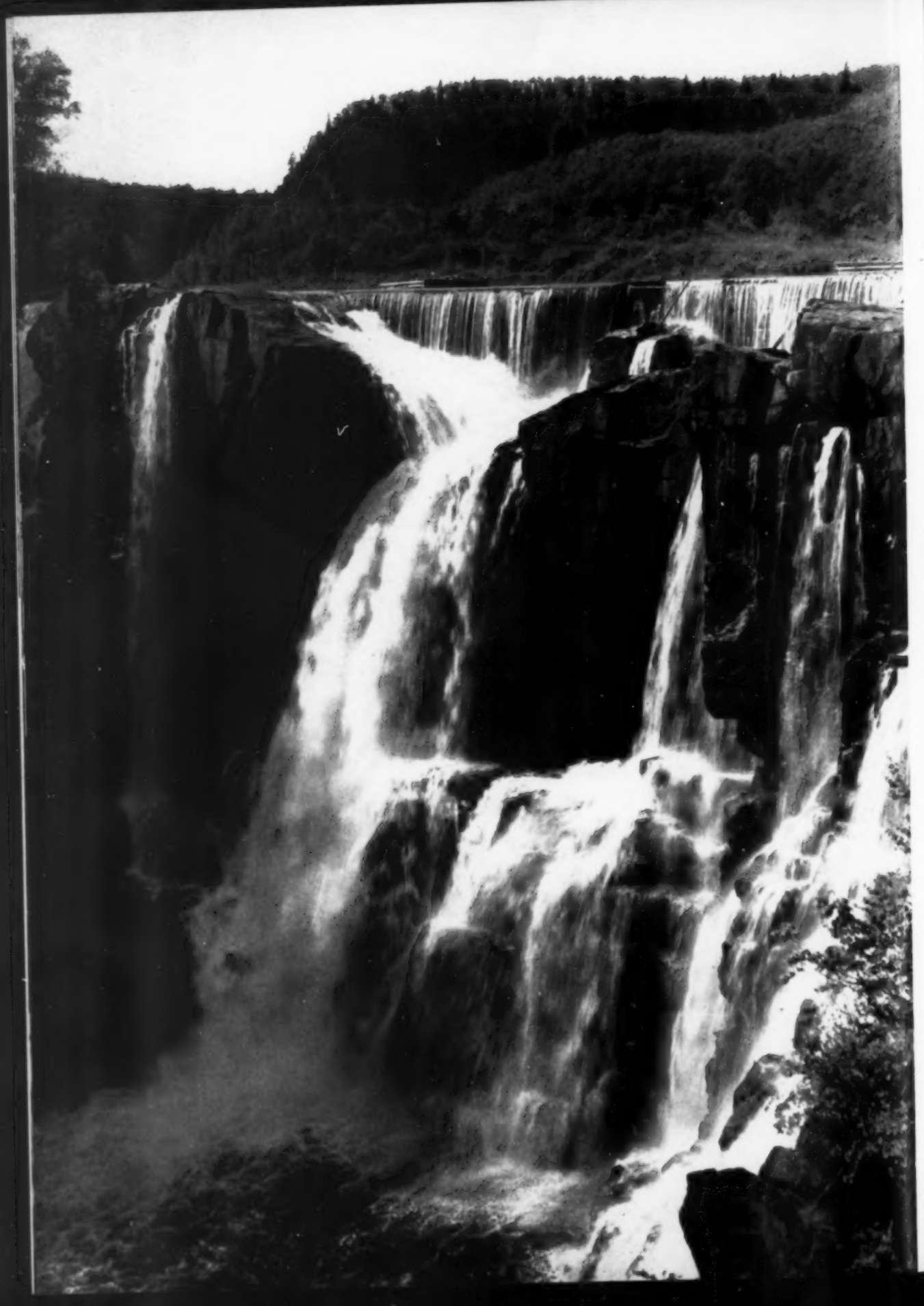
Young pioneers of the Astrakhan region of the Soviet Union on an excursion on the historic Volga River. Here two girl dancers are entertaining their group to a Russian folk dance.

Group of Moscow militiamen attend an outdoor art class in the suburbs of Moscow.



At the All-Union Agriculture Exhibition. "Cattle-rearing"—a high relief on the wall of the pavilion of the Moscow Ryazan and Tula regions.

Youthful tennis players at the stadium of the Central House of the Red Army in Moscow



NORTHERN ONTARIO

"LIMITS OF LAND SETTLEMENT FOR THE GOOD CITIZEN"

by **R. M. SMITH**

WITHIN the lives of many readers, quietly and unobtrusively, a vast empire is gradually coming into being. Little known prior to the beginning of this century, this great area, within the not distant future, will play an important part in Canada's welfare. Ontario's northland, 340,000 square miles in extent, would encompass most of the European countries, with the exception of Germany and Russia, and could sustain a population equal to that of all Canada. It contains millions of acres of pulp lands, myriads of lakes, vast timber limits, great agricultural areas (selected arable land alone is estimated to exceed the entire area of England), and beneath these surfaces lies untold wealth, — gold, platinum, silver, nickel, copper, iron and many lesser minerals — value at the present time realizing a return in excess of $250,000,000 per year.

The northland within this province commenced to attract official notice about 1884. At this time a suggestion was made that a railway into this country could be justified; it was not until 1897, however, that this thought was crystallized into action. Mr. W. A. Charlton, M.P.P., and Mr. C. T. Harvey, C.E., made an exploratory survey from Sault Ste. Marie north via the Missanakie River. While they did not reach Moose Factory, they at least saw sufficient evidence of great natural resources that they wrote in glowing terms as to their findings. Part of Mr. Charlton's report reads as follows:

"It seems to me a strange condition of things that a people so progressive as we are in Ontario, having for a portion of our northern boundary one of the greatest inland seas in the world, the sea and its surroundings possessing the greatest attractions for commercial enterprise, should be lacking of any means of communication between our commercial centres and this great field of wealth. I am not prepared to say to what extent the Government should assist in the construction of a railway, but I am sure it would be greatly to the advantage of the Dominion, and more particularly to this province, and especially for the City of Toronto, the national commercial centre, if railway communications were established at an early day. It would be the means of opening up a country hitherto shrouded in a very considerable degree of darkness, and enable us to obtain full and reliable information as to its resources. It would inaugurate a direct trade between the merchants and manufacturers of Ontario and Hudson Bay, and extend to regions beyond. It would open up for settlement the fertile belt north of the height of land. It would develop and make available the mineral and timber resources of an extensive country. I believe that the immense territory lying beyond Temiskamingue (Timiskaming) and Abbittibe (Abitibi) westerly and northerly to the great Albany River, is of sufficient importance to this province in land, timber and mineral wealth, to warrant the construction of several lines of railway for the purpose of developing the resources."

A more aggressive campaign for recognition followed directly after the Boer War. At that time a gratuity of 160 acres of land for services rendered was granted to those who had served in the war. This gratuity was later extended to apply to veterans of 1866 and resulted in the granting of some 16,000 certificates for land allotment. Possibly because of this allotment, but more likely due as well to an insistence upon the part of its few residents, ably supported by pioneering spirits of the southern part of the province, the Government undertook that the country would be made accessible to all who wished to enter.

Beginning in 1902, the Government of the Province of Ontario commenced the construction of the Temiskaming and Northern Ontario Railway. True, the Canadian Pacific had been completed as early as 1885, but its line ran east and west paralleling the Great Lakes, serving in a trans-Canada way rather than a north and south development. Sault Ste. Marie, Port Arthur and Fort William were already established municipalities, celebrated largely for their fine harbours and marine shipping facilities, but Ontario had more to offer than convenient lake ports and a

Left: — Northern Ontario, rich in water power, can supply the needs of industrial development. High Falls, Pigeon River

Ontario's pulp and paper industry has given rise to the development of modern town planning. Two such

right of way for Canadian railway lines. The country had resources; their values could be proven; stout hearts and courageous pioneers would disclose without question great wealth obtainable from timbered lands, agricultural areas and mineralized rock stretching into the land of the midnight sun; optimistic admittedly, but time has shown this optimism quite justified.

Ontario's northland has been accepted from the first as a mining country. Federal geological surveys as far back as 1842 report that a great pre-Cambrian area lies to the north of the Great Lakes. Sir William Logan himself is said to have studied the area and been impressed with its possibilities. This same section is now recognized as one of the world's richest mineralized areas. Granted, its timber producing possibilities were considered, but generally the earlier impressions prevailed that the country could be classified as either clay, rock or muskeg, having no particular value as this section of the province was too far removed and inaccessible for development. Transportation by railway, plane or highway has proven the fallacy of this assumption. To-day the country is known to contain great potential wealth.

Ontario is said to have incurred its first public debt with the building of the Temiskaming & Northern Ontario Railway. Time and space do not permit dwelling upon the many heartaches experienced by members of the Legislature before this project was approved. The first contract covering the road's construction was dated October 3rd, 1902. The first train reached Cochrane, the northern terminal, on November 28th, 1908.

History has been made since this date. The mining fields of Cobalt, Timmins, Kirkland and Larder Lake in the east, the Geraldton, Long Lac and Red Lake areas in the west have all been discovered and developed as large producers of gold and silver. The International Nickel Company at Copper Cliff still continues as the world's largest producer of this highly important metal. The Frood Mine near Sudbury is the largest producer of copper in Canada. World War No. 2 forces a sense of realization of the fortunate position Ontario's northland occupies as a producer of metals so urgently required in the manufacturing of various types of armament.

Following the rails came the prospectors' trail, then the corduroy road, and

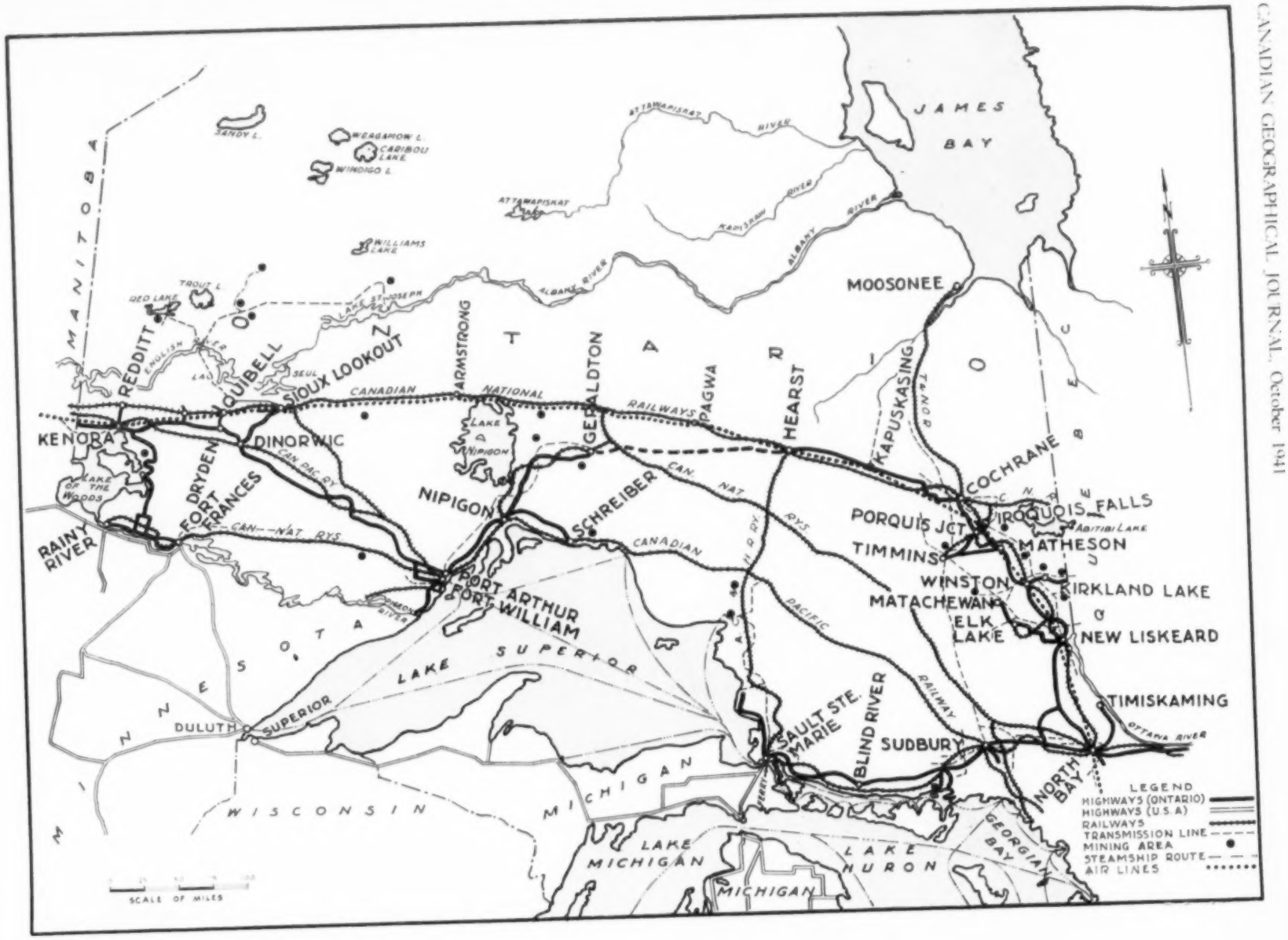
communities are demonstrated in these air photographs at Iroquois Falls (left) and Kapuskasing (right).

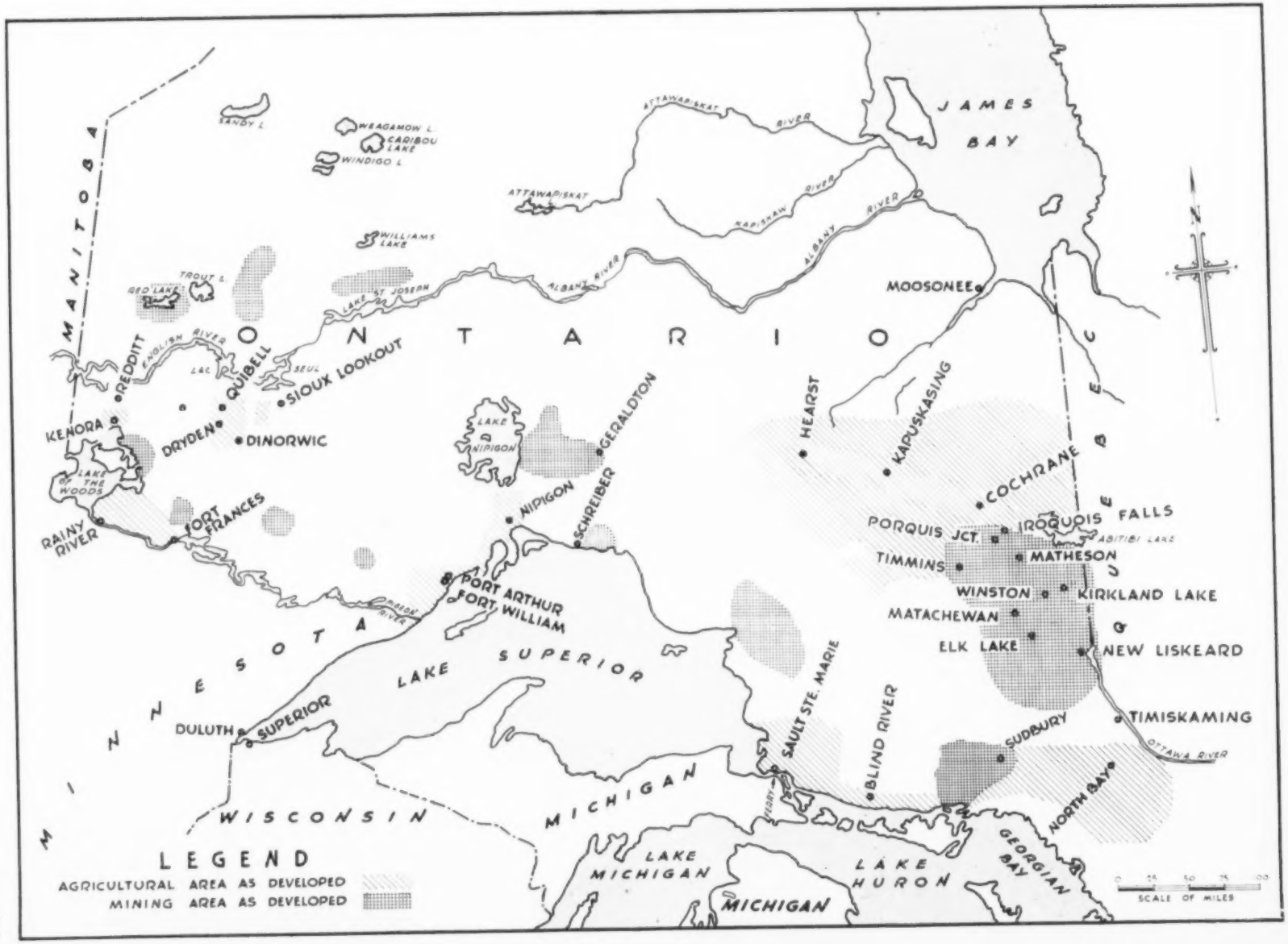
eventually the gravelled surface, often impassable and more frequently indifferent. The canoe, the pointer, and many other types of transportation played their part. Weird and ungainly these contraptions may have been, but they served their purpose. The motor car eventually found its way into these outlying sections, and with its introduction came a demand for improved roads. With the completion of each succeeding mile, more miles were required.

Settlers, lumbermen, prospectors and miners, — adventurers, it must be confessed, are the fathers of this great country. What a hardy, fearless type, funds one day, penniless the next, but always confident of another grub-stake! Many stories of real human interest could be told of Ontario's gold rushes, the hardships encountered, the difficulties overcome, failure, success, riches and losses. None could be told, however, that indicated discouragement, that optimism did not come to the surface. Frenchmen, Englishmen and Americans generally, they were always ready to lend a helping hand and re-equip a friend in need. Largely, such a group made up the early northland in which they believed; their convictions could not be dampened; they pressed their cases at every opportunity and rightly so, one must admit. Claims became prospects; prospects passed to mines; mines expanded and population came; tarpaper mining towns graduated into business centres; communities into established districts — such is the story of great mining centres and their voice is added to that of the motorist for more and better roads.

An authoritative statement prepared for presentation before a Select Committee of the Legislature appointed in 1939 to inquire into the administration of the Department of Lands and Forests reads as follows:

"The forest resources of the Crown in the Province of Ontario are enormous. Up to the present time over 100,000,000 acres of the forest area have been brought under the supervision and fire protection system established by the Crown and about three-quarters of this area has been surveyed. In addition to this area, there are vast tracts of land in the north country which, while they are at present neither supervised nor considered accessible for immediate utilization, yet they represent an additional tremendous reserve of forest growth which


JAMES BAY
MANITOBA
SANDY L.
WEAGAMOW L.
CARIBOU LAKE
WINDIGO L.
ATTAWAPISKAT
ATTAWAPISKAT RIVER
KAMJISKAM RIVER
ALBANY RIVER
WILLIAMS LAKE
RED LAKE
TROUT L.
LAKE ST. JOSEPH
ONTARIO
REDDITT
ENGLISH R.
LAC SEUL
QUIBELL
SIOUX LOOKOUT
CANADIAN NATIONAL RAILWAYS
ARMSTRONG
LAKE NIPIGON
GERALDTON
PAGWA
HEARST
MOOSONEE
KAPUSKASING
T. & N. O.
QUEBEC
KENORA
DINORWIC
CAN. PAC. RY.
LAKE OF THE WOODS
DRYDEN
FORT FRANCES
RAINY RIVER
CAN. NAT. RYS.
NIPIGON
SCHREIBER
CAN. NAT. RYS.
CANADIAN H.B.R. RYS.
COCHRANE
PORQUIS JCT.
IROQUOIS FALLS
ABITIBI LAKE
TIMMINS
MATHESON
WINSTON
MATACHEWAN
ELK LAKE
KIRKLAND LAKE
NEW LISKEARD
TIMISKAMING
PORT ARTHUR
FORT WILLIAM
NIPIGON RIVER
LAKE SUPERIOR
DULUTH
SUPERIOR
MINNESOTA
WISCONSIN
MICHIGAN
SAULT STE. MARIE
BLIND RIVER
SUDBURY
CANADIAN PACIFIC RAILWAY
OTTAWA RIVER
NORTH BAY
LAKE MICHIGAN
LAKE HURON
GEORGIAN BAY
SCALE OF MILES
LEGEND
HIGHWAYS (ONTARIO)
HIGHWAYS (U.S.A.)
RAILWAYS
TRANSMISSION LINE
MINING AREA
STEAMSHIP ROUTE
AIR LINES



NORTHERN ONTARIO

Typical scene in Northern Ontario's vast forest regions. A storage pile of pulpwood and general view of loading arrangements

will some day provide large revenues for the Province of Ontario.

On the area at present supervised and protected by the Crown it is estimated that there are the following quantities of timber:

181,682,000 cords of spruce
26,000,000 cords of balsam
79,000,000 cords of jackpine
6,000,000,000 feet, board measure, of white and red pine
3,000,000,000 feet, board measure, of maple and yellow birch
487,000,000 feet, board measure, of other hard woods
792,000,000 feet, board measure, of hemlock

"Up to December 31st, 1939, 16,042 square miles or 10,266,880 acres of forest lands were under timber licence. The areas which were under pulp concessions at the same date totalled 65,307 square miles or 41,796,000 acres; only a portion, therefore, of the presently supervised forest regions of the province has been allocated for cutting."

Left:—One of many power plants harnessing the generous waters of Northern Ontario. Montreal River

Right Page:—Northern Ontario offers water for transport, water for power, and proximity to vast forest supplies. Spruce Falls Pulp and Power Company plant at Kapuskasing exemplifies this happy combination for economical, sustained operations.

Boom of logs and lumber mill, Blind River

Also from the report, "So long as proper conservation methods are employed, such as the regulation of cutting, fire protection and combating insect destruction, there is no need for large scale reforestation in the North."

Lumbering has long been one of the main industries. The pulp and paper industry which has been developed since the beginning of the present century has added immense potential wealth to this vast tree-covered area. Spruce and balsam have been the main source of supply; however, in the last few years jackpine, poplar, Balm of Gilead and hemlock, of which there are vast stores, are being used for different kinds of paper.

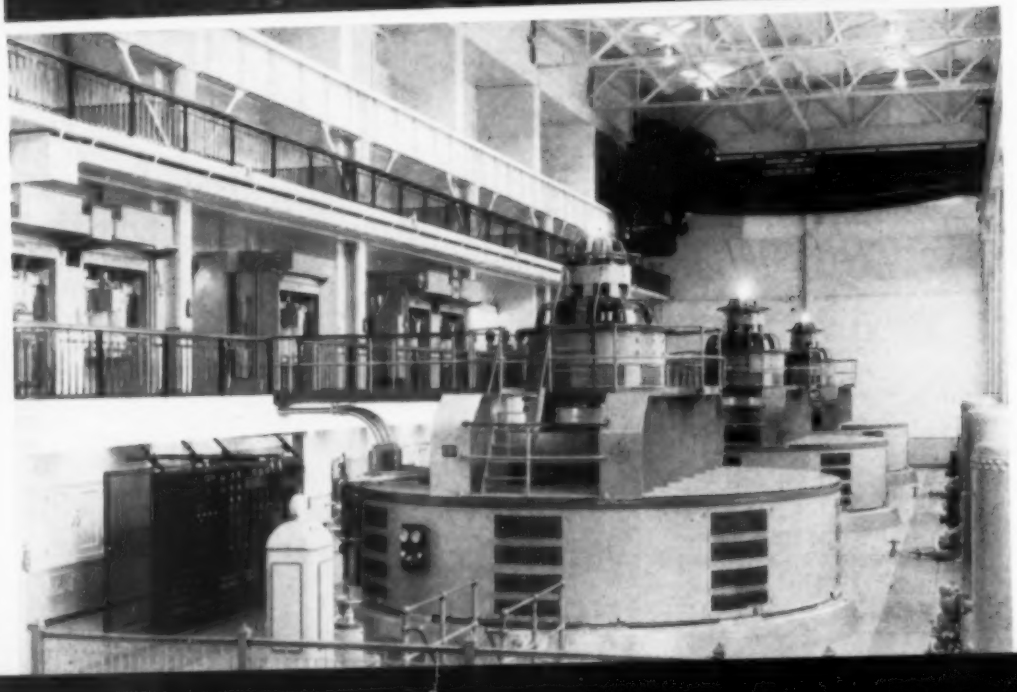
In speaking of hydro-electric development in this north country, Mr. O. Holden*, Chief Hydraulic Engineer of the Hydro Electric Power Commission of the Province of Ontario, says:

"In three large areas in Northern Ontario extensive transmission systems,

* Editor's note—Mr. Otto Holden, C.E., Chief Hydraulic Engineer of The Hydro Electric Power Commission of Ontario, is a graduate of the University of Toronto. Since joining the Commission in 1913 he has been responsible for the design of many hydraulic plants including the Nipigon River plant at Cameron Falls, Queenston plant on the Niagara River, Chats Falls plant on the Ottawa and the Alexander Development on the Nipigon. Later, as deputy-head and head of the department, he supervised the design and construction of plants on the English and Albany Rivers, a group of marine railways in Northern Ontario, the Little Long Lac Diversion Project, and numerous other works.

Transmission of power. Hunta switching station and junction from the West

Harnessing water falls. Abitibi Canyon Development Tail-race power house and dam structures



Ontario's electrical plants provide the equipment to transform water power to electric energy for lightning transmission to meet industry's needs

radiating from hydro-electric generating stations, serve important mining and industrial developments. In the east the Abitibi district has its most important source of supply in the Abitibi Canyon plant, located 70 miles north of Cochrane and 120 miles south of James Bay. This plant, the second largest in the province, has an installed capacity of 330,000 horsepower. Transmission lines extend southerly to Sudbury, a distance of 250 miles, where a large amount of power is supplied to the nickel industry. Between the Canyon and Sudbury, power is supplied from the same source to various industrial mining developments, and interconnection takes place with the systems of the Abitibi Power and Paper Company and the Canada Northern Power Company. In the neighbourhood of Sudbury a separate system, with four generating stations interconnected with other privately-owned power plants, supplies 60-cycle power to industries, municipalities and mines.

"Farther west the Thunder Bay system, with its generating stations on the Nipigon River having a capacity of 125,000 horsepower, supplies power to Port Arthur and Fort William to the south, and to important mining developments to the north and east.

"In the extreme north-western part of the province, generating stations at Ear Falls on the English River and at Pat Rapids on the Albany, connected by a transmission line 160 miles in length, supply power to municipalities, industries and several groups of mines.

"In addition to the plants in the above systems, there are a number of other privately-owned developments of importance, including those on the Abitibi, Mattagami, Spanish, St. Marys, Montreal, Kaministiquia, Seine and Winnipeg Rivers.

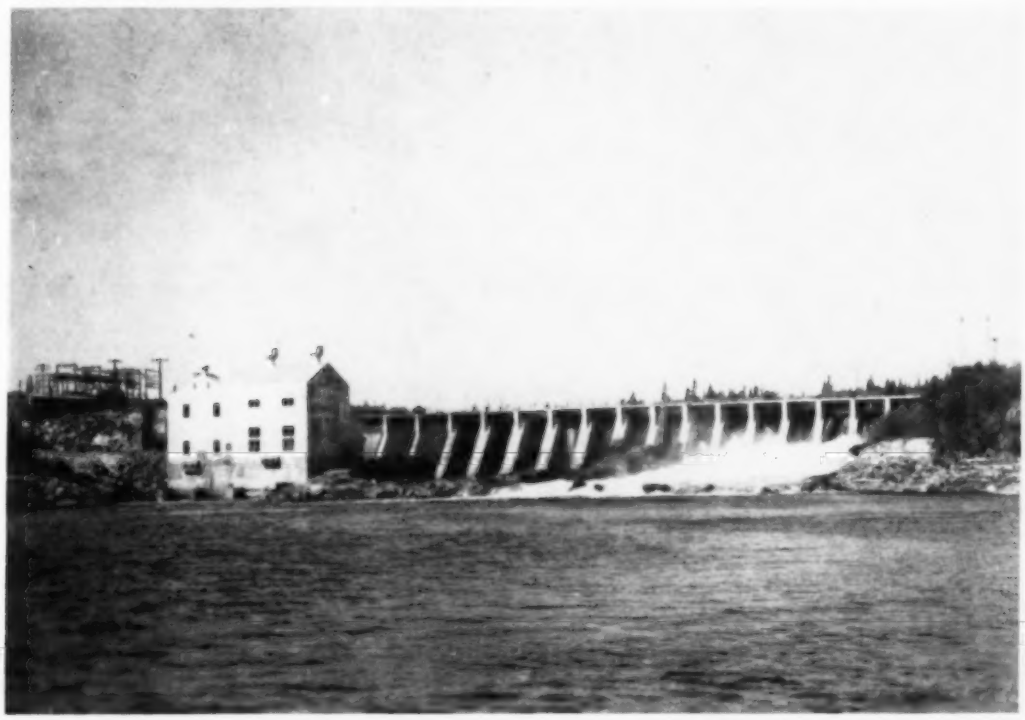
"The Cameron Falls plant on the Nipigon River, which came into service in 1919, was the first operated by the Hydro Electric Power Commission in Northern Ontario. The growth of load has been rapid, but steady, during the past eight years, as shown in the figures below."

Combined Peak Loads of Northern Ontario Districts Operated by the Hydro Electric Power Commission

Year	Peak Load (H.P.)
1933	150,900
1934	208,000
1935	245,100
1936	300,800
1937	328,400
1938	335,200
1939	355,200
1940	373,600

Mining, timber and pulpwood production have, up to the time of writing, been

Ear Falls power house and dam serve yet another section of Northern Ontario.



1

2

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(1) Modernized equipment speeds up road construction.

(2) Engineers' camps at Shehak River

(3) Tractor-driven sleighs loaded with lumber

(4) Stripping rock

4

VANISHING

Road building in Northern Ontario proceeds apace. Inter-communication thus established facilitates forest and mine operations, paves the way for

5

(5) Pole track at Lake Helen

6

7

8

(6) Typical construction camp at Nagogami River

(7) Tote road from railway to construction area

(8) Bulldozer clearing road east of Britons Narrows.

(9) Timber culvert

9

comprehensive settlement plans in keeping with nature's rich endowment and world needs for enduring community development.

10

(10) Overcoming muskeg obstruction. Fill at Lake Helen

Above: — Modern homes and barns adorn the agricultural landscape.

Left: — Potato crop at Thornloe

AGRICULTURE IN NO

Bringing in the harvest.

A thrifty crop of golden grain, Timiskaming

NORTHERN ONTARIO

Right:—Modern equipment takes its place in speeding up farm production. Combine and tractor

Below:—Oat and barley field at government farm, New Liskeard

Scene in the clay belt region of Northern Ontario

the principal occupations of this northern section. The time will come when agriculture will play as great a part. A Federal experimental farm of several hundred acres, established at Kapuskasing and a provincial farm at Hearst grow practically all types of vegetables produced in the south. Aside from vegetables they also grow various types of grains, the productive equal of any harvested elsewhere. Many fine farms have already spread themselves over the countryside. They are being well stocked with dairy cattle and good horses. Within a very short time the production of dairy products will show an improvement beyond our fondest hopes. Reports from railways at the present time indicate greatly increased shipments, particularly in butter. The growing season in this latitude is bound to be short. Longer days and increased rainfall balance conditions in other districts, permitting equal growth with warmer areas. Agricultural studies have been directed toward the development of farm products that mature quickly and permit of early harvesting.

Mr. T. D. Jarvis, *B.S.A., Research Fellow in Agriculture to the Ontario Research Foundation, states as follows:

"The magnitude and romance of the mining developments of Northern Ontario have served to obscure the equally rich but less spectacular agricultural resources of this area. But the prospect of vast European immigration following the war, coupled with the fact that in Northern Ontario we possess one of the few undeveloped rich agricultural areas of the world, is focusing attention upon these as yet scarcely scratched resources.

"Up to the present time, agricultural settlement of this frontier has been largely an outgrowth of the mining and lumbering industries, and the great waterpower and road-building developments which these industries have made possible will prove major factors in settlement programmes of the future in Northern Ontario. About one-third of the Trans-Canada Highway passes through Northern Ontario, constituting the main artery of a vast network of roads which is constantly spreading in all directions. Until very recently farm settlements were largely restricted to areas

Dairy cattle at Earlton

adjacent to mining, lumbering, and pulp manufacturing towns, and many owed their existence to the proximity of such markets rather than to their inherent capacity for agricultural production.

"Actually, the real agricultural wealth of this area lies north of the pre-Cambrian shield in the fertile clay belt. A few settlements in this area date back as far as thirty years and the best of these farms are valued by their owners as highly as the most productive mixed farm land in Southern Ontario. But practically the entire clay belt of approximately 16,000,000 acres of rich virgin soil, extending 800 miles from the Quebec border to the prairies of Manitoba, still await the axe and plow of the pioneer."

As with all sections of the country, temperature range plays its part in this northland, varying from 90°F. in the summer to 50° below zero in the winter — wide, it is true, but not as drastic as might appear at first glance. Canada's cold is dry, lacking the penetrating effect applying in much higher temperatures under damper conditions. The summers are shorter than apply in the south, cool nights invariably following warm days. The growth is rapid; long light periods supplemented by plenty of moisture and a fertile soil hasten maturity.

Continuing from Mr. Jarvis' report, he says, "although this vast region includes great diversities in climate and soil conditions, with a corresponding diversity in capacity of individual localities for various types of farming and production of special crops, it is on the whole best adapted for mixed farming. This constitutes an immeasurable asset in an area when the virtues of self-sufficiency, and the disadvantages of extreme specialization in agriculture, are becoming increasingly apparent."

Efficient land utilization, however, whether primarily or only secondarily commercial, is based on recognition of the fact that for every species and variety of farm crop and animal there is a specific combination of climate and soil under which it will achieve maximum productivity. The major problems confronting settlers in any new area, therefore, are first to determine the precise combination of climate and soil under which they must operate, and, second, to discover the crops and varieties and breeds of live stock best adapted to these local growing conditions. The final selection within these limitations must, of course, be governed by domestic requirements and demands of available markets.

The early pioneers of Southern Ontario were forced by lack of markets and trans-

*Editor's note:—Mr. T. D. Jarvis, since 1930 has been engaged on the staff of the Ontario Research Foundation working on a fundamental research programme based on a study of those factors which have an effect on crop yield. His statement carries the further authority of thirty years' previous scholastic and practical training since graduation in 1900 from the University of Toronto with the degree of B.S.A., including post-graduate studies at Cornell and Oxford Universities, several years as Associate Professor at the Ontario Agricultural College, and ten years with the International Nickel Company as director of agricultural research.

Above: — Northern Ontario potato field — with anticipated yield of 1,000 bushels to the acre.

Left:—The Dominion Experimental Farm at Kapuskasing demonstrates what clay belt land can do. A representative hay crop.

Northern Ontario believes in mixed farming. Modern equipment for raising poultry

Every modern convenience to step up production of dairy products.

Sheep raising is successfully practised.

portation facilities to establish farming on an almost completely self-sufficiency basis, with the few available varieties of crops and breeds of stock being distributed regardless of regional, climatic and soil diversities. Survival of a great measure of this self-sufficiency has been a valuable stabilizer of Ontario agriculture during subsequent periods of economic upheaval. But the inevitable transition to commercial production, with increasing specialization in cash crops, has been slow and costly, due to the necessity for individual farmers to discover for themselves the capacity of their own land for the production of new crops and for the new and improved varieties of old crops which were being developed. It was necessary for the farmer to do this himself because it is only very recently that any serious attempt has been made to co-ordinate the findings of meteorological records and intensive soil surveys into a practical basis for land utilization and crop distribution policies for the province. Tremendous strides have been taken in recent years in these studies and in the breeding of varieties specially adapted to growing conditions in individual districts. It will take many years to eliminate the low acre yields and soil depletion which are the outgrowth of pioneer practices in Southern Ontario.

Future settlement in Northern Ontario, however, faces no similar handicaps. Never, indeed, has frontier settlement been approached under more propitious circumstances. Not only does the climate of this area make great diversification of crops possible, but the science of land utilization now makes it possible to appraise in advance of settlement the potentialities and limitations of various localities, and to provide accurate recommendations as to crop and stock distribution, as well as the best cultural practices and methods of soil conservation.

Although most of our common crops can be grown successfully in Northern Ontario, records show that ordinary varieties of these crops produce lower yields than in Southern Ontario, whereas those varieties selected or developed for their adaptability to the shorter growing season, lower temperatures and longer days of this northern region outyield the common varieties as much as fifty per cent. On the other hand, crop failures are largely attributable to settlement of areas unsuitable for agriculture, or of attempts to grow poorly adapted crops and varieties.

Northern Ontario has demonstrated enormous capacity for production of such cash crops as potatoes, garden peas, malting barley, flax and certain varieties of fruits. Already modern transportation facilities make it possible for farmers in many districts to compete in southern markets with other districts less favourable for these crops. Farmers around New Liskeard specialize in potatoes, clover and grass seeds; Sudbury district in dairy farming and seed potatoes; the district around Port Arthur in malting barley, potatoes and poultry. Manitoulin Island, also included in Northern Ontario, produces sheep and turkeys most successfully, while Rainy River has many good cash crops such as seed grain, flax, honey, sheep, etc. Potatoes not only yield much heavier when grown on suitable soils in the North but are much freer from insects and disease than when grown in Southern Ontario. It is the recognition of this need for adapting crops and cultural practices to meet local requirements which is responsible for more and more decentralization of our government experimental and extension services. The experimental farms at New Liskeard, Kapuskasing and Monteith have been singularly successful in demonstrating this truth to northern farmers, and in interpreting in terms of northern procedure the general findings of agricultural scientists.

Selection of settlers for this region is another problem which is receiving increased attention, for experience has shown that some races exhibit definite superiority over others, not only in adaptation to the rigorous climate but in skill in those agricultural practices best suited to areas of short growing season.

Group settlements have exhibited many advantages, not only in solving social problems but in facilitating co-operation in the use of mechanized equipment, distribution of seed and stock, and in harvesting, grading and transportation of cash crops. Such settlements also provide a nucleus for establishment of secondary agricultural industries such as manufacture of potato products, canning factories, creameries, et cetera, which must inevitably develop in areas where cheap water power is obtainable and where cost of transportation of raw products is necessarily high."

Freighters on Lake Superior

"The International Limited" runs between Montreal and Chicago.

A section of concrete highway No. 17, east of Sudbury

Transportation is the problem in this country of enormous distances. The railway companies have played a real part in its solution. Before 1900 the Canadian Pacific east and west was the only line. Since that time the Temiskaming & Northern Ontario Railway has been constructed, first to Cochrane, then in 1932 extended to Moosonee on James Bay, providing an ocean outlet. True, the traffic in this direction has not justified the continued operation of this line, but its usefulness may have a new importance because of the development of lignite fields recently discovered in large quantities in this area.

Other railway lines completed include the National Transcontinental, most northerly line running from east to west across the province and completed in 1915 — now part of the Canadian National Railways; the Canadian Northern, completed in 1915, later incorporated within the government-owned Canadian National; Algoma Central and Hudson Bay Railway, completed from Sault Ste. Marie to Michipicoten about 1906, extended to Hearst in 1914.

Railways have already built more than 4,000 miles, stretching their steel into mining camps or forming links in established trans-Canada systems; their value to the North becomes more manifest with each passing year. Claims have been made that railways overbuilt in this great section; supplemented by highways as they will be as time will permit, the railways will justify their construction.

Additional to railways, fine lake ports along the upper part of the Great Lakes permit marine shipments, both domestic and foreign. Tonnages exceeding in volume those entering the Suez and the Panama Canals pass through the locks at Sault Ste. Marie each year. Much of Canada's grain crop is moved along this water route. The Canadian Bureau of Statistics indicates that 89,857,672 tons of freight passed the combined United States and Canadian locks in 1940. By international agreement no tolls are charged.

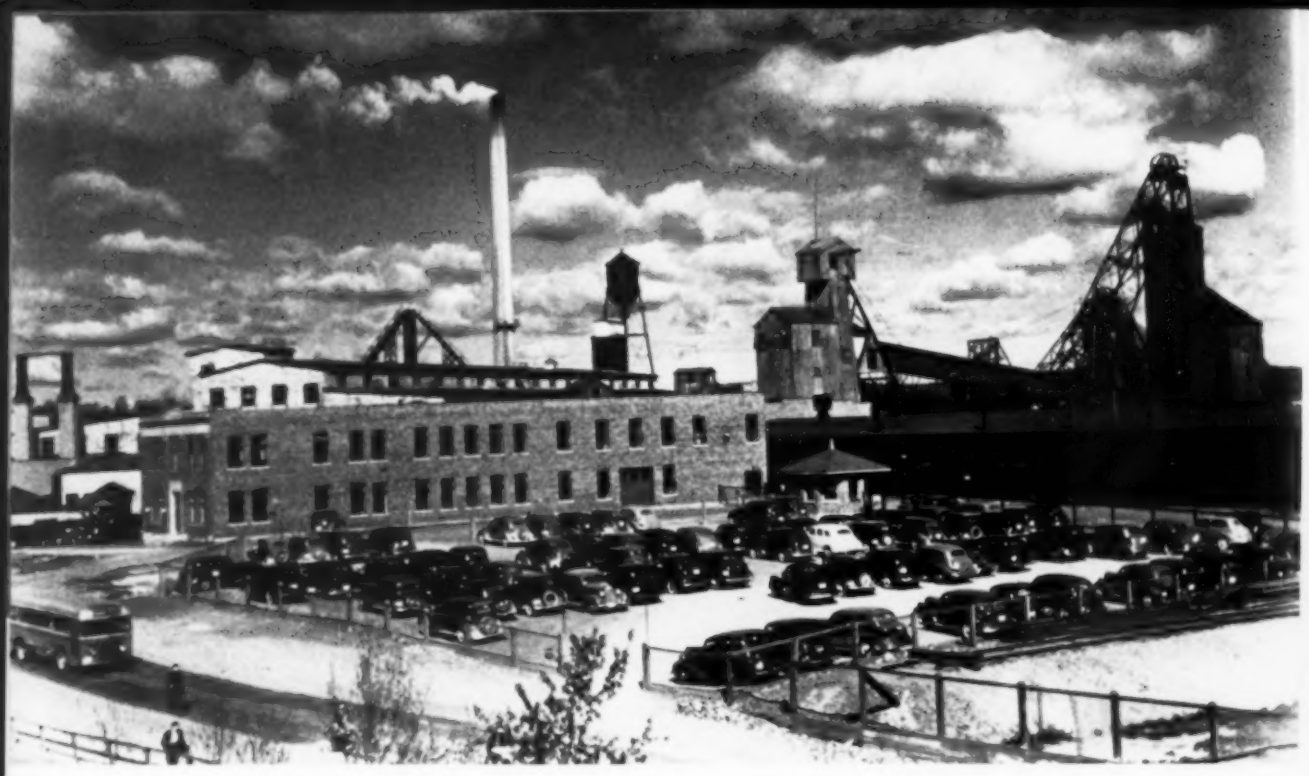
More recently the construction of a number of municipal and federal airports has added another system of transportation of considerable importance. Especially has this method been used in mining and survey work, facilitating the movement of equipment and men into outlying sections. Aside from a local significance Trans-Canada Airways cross this country carrying passengers and mail in ever increasing volumes.

Finally, and equal in importance, is the highway system, serving as it will all lines of endeavour; admittedly still limited in scope, but rapidly reaching into the heart of the country, built to standards the country can justify and in keeping with the progressiveness of the area being served.

At the beginning of 1936 it was estimated that close to 17,000 miles of trail, bush road, settlers and mining road had been built, some of this mileage in a meandering way serving as a through highway connecting principal centres. None of the construction was brought to the standard we consider modern, but under the circumstances the roads provided a great convenience, and, having in mind motor car population, were considered adequate. Roads stretched fairly well across the country from North Bay west to Sault Ste. Marie, from North Bay north to Cochrane and west to Hearst. Distance,

North shore, Lake Superior region, near Jackfish, Ontario

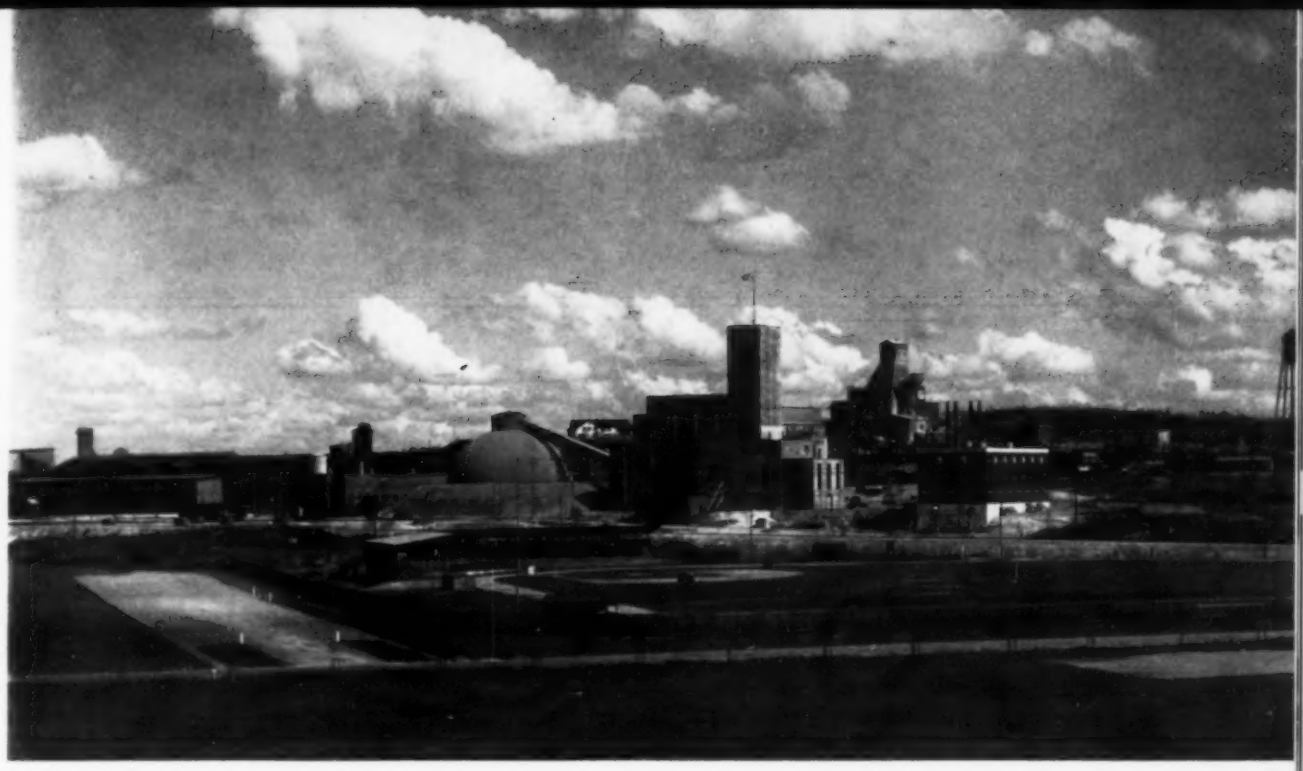
Mink Tunnel, Coldwell, Ontario



shortage of money and natural obstructions separated the East from the West. From Port Arthur and Fort William one could travel east to Nipigon 72 miles away, south-west to the International boundary 45 miles away, and north-west to the Province of Manitoba some 342 miles distant. The extreme West had been connected north and south by a road from Kenora to Fort Frances at the International Bridge, the United States boundary. These roads formed the framework of the main system.

A careful study of the North's highway transportation system was made during 1936 with a view to determining future policy: whether to adopt modern types of road development running to direct lines, easy grades and curves, built along express highway specifications, abandoning to a large degree the meandering types of roads already in existence, or to make an effort to improve existing conditions, simply surfacing the old gravel roads and assuming that they were quite adequate. The first proposal was put into effect. It was decided to abandon many miles of old road, certainly where alignment was bad, grades heavy and the routing of the old road indirect. It was realized that the country had a future; that traffic would increase to many times its present volume; that highways built to generous proportions with wide fills, easy grades, sweeping curves and long tangents would create and entice traffic. Distances are great in the northland, so safety, comfort, pleasure and ease of driving must be incorporated into the

Some stalwarts of Northern Ontario's mining industry which, though in production for over a quarter of a century, continue to b



road surface; otherwise, highway traffic will be limited.

Highway building in this country has called for vision, ability to visualize great expansion. Buildings may come and go, but highway alignments, grades and structures are practically indestructible. Direct routes are of first importance. "Through highways" should be exactly what they are called, and so in this area community centres have been missed, towns and cities have been by-passed, provision only being made to provide suitable inlet and egress to all important centres. The citizens of this great section with their broad-minded attitude have encouraged the highway development in every possible way, in no single instance allowing selfish interests to interfere. Work on the express system of highways as laid out has been temporarily delayed. Money is needed for this second World War that we are passing through, but our people realize that the interruption is only a phase, that progress will continue again directly the new matter in hand has been concluded. In the meantime, certain works are still progressing, the major project being the connection between east and west. This last gap, 153 miles in length, it is hoped will be open this year. The East will meet the West, Canada will have its first Trans-Canada Highway. It seems fitting that the last gap should be closed almost exactly in the centre of Ontario's northland. At this time particularly the road has an added significance,

to be among the leading contributors to the gold output. Top left:—Lake Shore. Top right:—Hollinger. Below:—Dome.

Highway No. 17 at Sudbury overlooks smelter of International Nickel which supplies the world with over 90 per cent of its nickel.

One of the Red Lake mining developments

Glory Hole, Young Davidson Mine, Matachewan

serving as it may a very important link in a wartime highway transportation service.

This section of highway also opens another fine mining district at Geraldton, already proven as a major producer of gold. It makes available much lake country, ideal from a tourist point and a factor in the production of hydro-electric energy. Spruce, balsam, pine and pulpwoods cover vast acreages throughout this section.

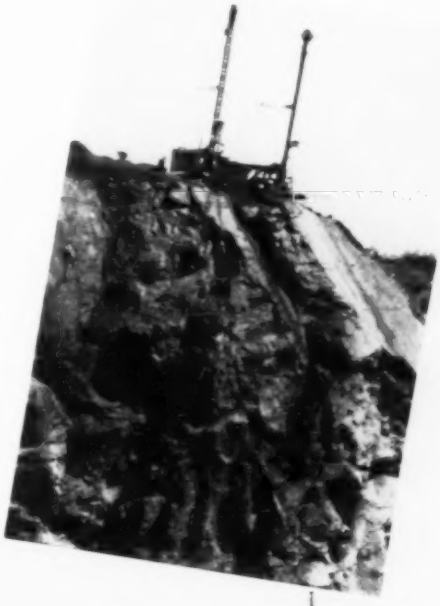
With the completion of grading and gravelling of main highways, many miles of high-class pavements both Portland cement concrete and bituminous, are being laid. It will be the policy of the Provincial Government to continue this practice as fast as funds can be made available. While capital is temporarily limited, as previously stated, studies are being continued covering the entire transportation system in this country. It is evident that many men will be available directly this second World War is over and certainly no more profitable undertaking could be considered than the development of highways within the country.

In the North the highway engineer is particularly fortunate as the country abounds in lakes and rivers. Even though the highway development is modern, the main roads often touch the shores and banks of many lakes and streams. Development roads serving as feeders, lead to additional areas opening this part of the province to the sportsman and tourist. From the time the fishing season opens in May to the close of hunting season in November, this area is a paradise for those who wish to leave their cares behind and indulge in the pleasures of rod and gun.

Commencing in 1900 the population of this north section was estimated to not exceed 20,000 people; to-day over 375,000

Another leading contributor of gold is found at Schumacher--McIntyre Mine.

The mining industry of Ontario employs some 35,000 skilled men who toil many thousands of feet below ground to blast the ore that will feed the mills on the surface. It is estimated that these hard-working Canadians are responsible for the welfare of 150,000 dependants, who form the nucleus of the population of the cities and towns of Northern Ontario.



Iron mining operations. Electric blast hole drilling 9-inch holes in Helen Pit (right). Loading Helen ore at Michipicoten Harbour (below).

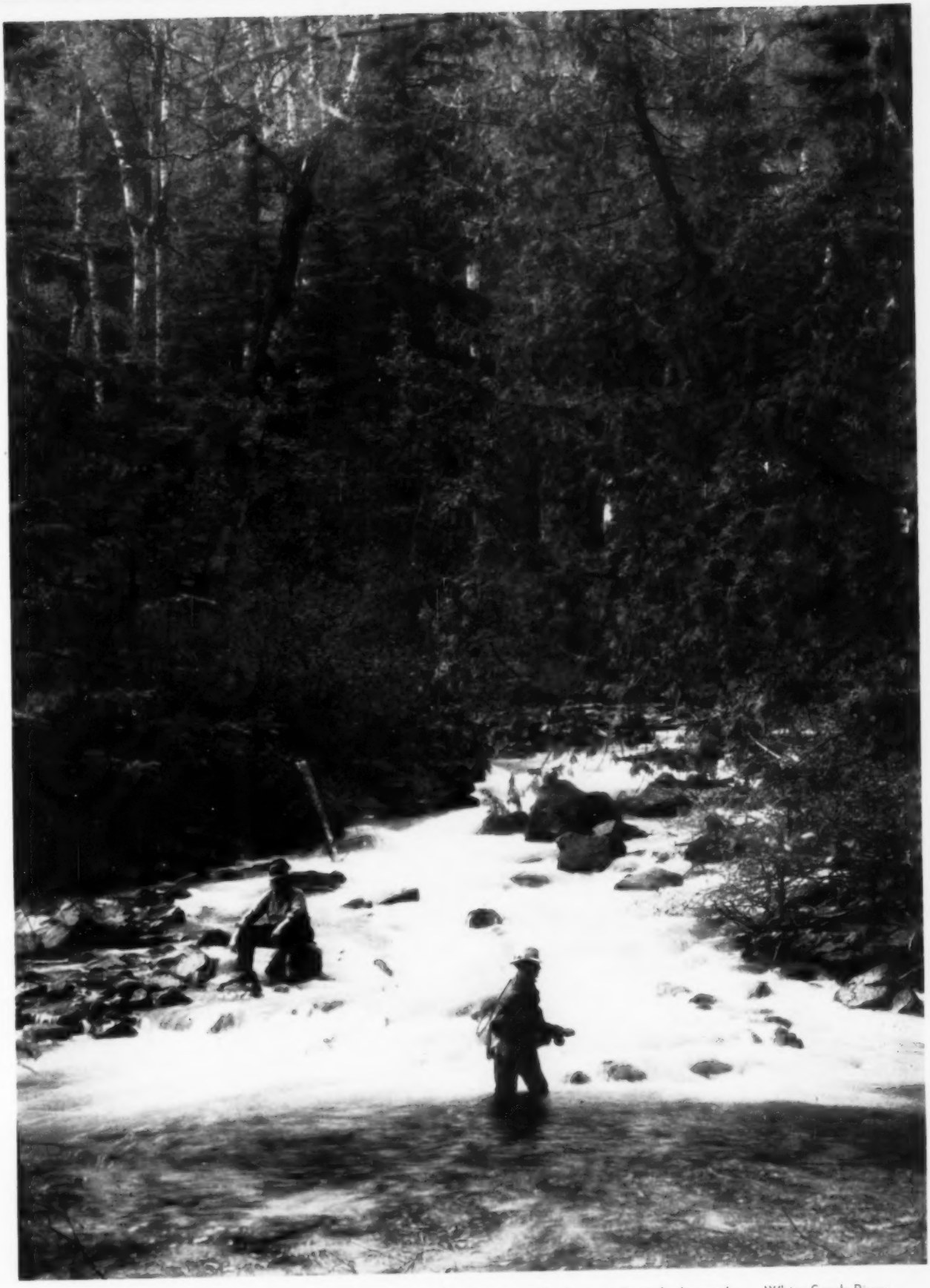
reside and earn their living within its boundary; slow in population increase, it is true, but exceeding many like areas taking the population of Canada as a whole. Northern Ontario contains approximately five-sixths of the land area of the province; its population, on the other hand, is close to one-sixth of that of the southern part. It has been the endeavour as far as possible to eliminate the so-called boundary line between the two areas, intermingling effort from a development point in such a way that any line of demarcation shall disappear. Southern Ontario's entry into the life of the other part of the province is slow but sure, each succeeding year showing closer co-operation, a greater appreciation of each other's problems.

Admittedly this type of intrusion is best suited to Ontario's northern country. Settlement is bound to be delayed, however, and particularly with uncrowded areas in the older parts of the province still awaiting occupation. The colonization of the North by Canadians is bound to cover many years. If, on the other hand, immigration returns to the volume applying in pre-depression years, the Province of Ontario is in a much better position to direct settlement, communications are vastly improved, and each year adds much in this direction. The North offers the pioneer just such a field for endeavour as applied in the early days in older Ontario. Our forefathers succeeded then, creating a heritage. Success will crown real effort again. Communities already established attest to the desirability of this type of settlement. Scattered holdings covering wide areas without communications should not be permitted. Abandoned farms often tell the story of a lonely existence, lack of perseverence and a want of social intercourse.

Ontario's northland or New Ontario, as it has often been called, dates its history from the beginning of the Hudson's Bay Company, 1670, and for more than two centuries it continued to be the home of the hunter with the production of furs its only interest. Then as the North-west became a factor in the production of wheat the great clay belt of Ontario began to draw attention. Railway lines reached into these unexplored areas. The building of the C.P.R. through Sudbury caused the discovery of copper in this section, followed later by the producing of nickel. The Temiskaming & Northern Ontario line, in its endeavour to tap the clay belt and its timber resources, accidently uncovered valuable silver ores at Cobalt. Many mining men became wealthy with this development; prospecting of adjoining areas commenced as a matter of course. Kirkland Lake, Porcupine and other fields proved sources of rich gold finds, deposits later developed with the riches obtained from the Cobalt field. And so the country was acclaimed. Prospectors and mining men from every part of the world poured into these northern sections. The story from a mining point of view continued along similar lines; new areas uncovered new riches. Still to-day in this north section not more than ten per cent of the area has actually been thoroughly investigated. What the country will eventually produce none can prophesy; sufficient to say the land offers romance, adventure and reward to those ready and willing to work for it.

Freedom loving people of many nationalities have already found homes in this great area, and many will follow, seeking a haven from tyranny and repression. Those ready to accept responsibility and prepared to loyally support their adopted country will find a refuge and a welcome. The only requisite the country asks is that one becomes a GOOD CITIZEN.

Keewatin Channel Bridge, highway No. 17, west of Kenora



Northern waters serve mankind in many ways — power the mills, carry the logs, and satisfy the angler. White Sands River, Nipigon district

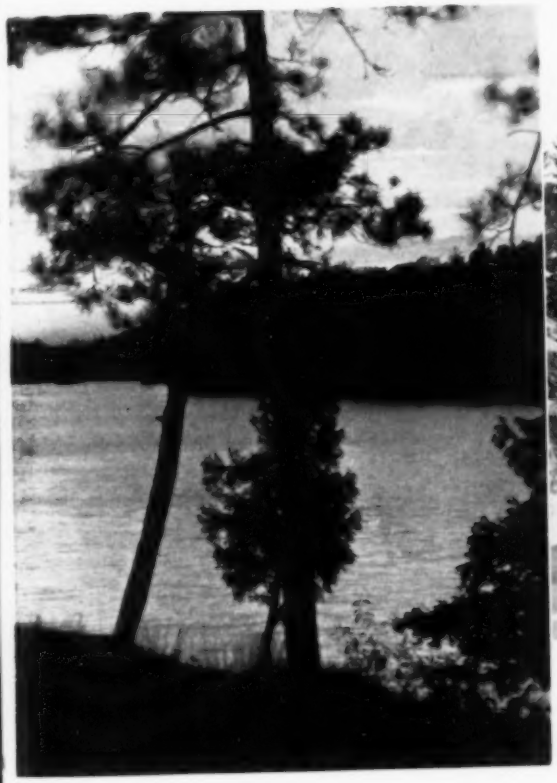
Section of highway No. 11 looking north at Herridge Lake, near Timagami

Section of highway No. 17 near the Manitoba boundary

Cavers Hill, 25 miles west of Schreiber, highway No 17

Westward ho! Nipigon River bridge on highway No. 17

GLIMPSES OF NORTHERN ONTA R



ONTA RIO'S VAST HOLIDAY DOMAIN

EDITOR'S NOTE-BOOK

Carleton J. Ketchum is a Canadian-born newspaperman who spent five winters in Moscow, toured the whole of European Russia and crossed Siberia from Moscow to China, for the *London Daily Express*, owned by the Canadian-born peer Lord Beaverbrook. He travelled the world, visiting nearly every country in the world, as Special, Foreign and War Correspondent, and began writing on Russia in the winter of 1922-23 when he first went to Moscow to collect material on the results of the Red Revolution. Mr. Ketchum served in the first Great War as an officer of the Canadian Field Artillery, and was awarded the Military Cross during his two years' service in the front-lines of France and Belgium.

Dr. W. B. Sutch is a New Zealand economist whose field is the analysis and description of contemporary trends in New Zealand's economic and social life. He was at one time a research fellow in economics at Columbia University, New York City. The author of several books on New Zealand's economic life, Dr. Sutch is a member of the National Council of the New Zealand Institute of International Affairs.

R. M. Smith, B.Sc., Deputy Minister of Highways for Ontario, whose informative articles "King's Highways of Ontario" and "The Queen Elizabeth Way" provoked such wide editorial comment in Canada and other countries, makes a further contribution in this issue in which the relation of highway construction to the development of Ontario's northern heritage is set forth. The author elucidates a plan for post-war settlement with supporting statements from scientific authorities. Mr. Smith, Ontario born, and a graduate of Queen's University in Civil Engineering, brings to his task upwards of a quarter of a century of following his profession and recent extended surveys in the United States and European countries.

AMONGST THE NEW BOOKS

The Last Million Years by A. P. COLEMAN, PH.D. (The University of Toronto Press, Price — $3.50).

Dr. Coleman had nearly completed the manuscript of this book several years before his death in 1939. During the last few years of his life, when he was over eighty years old, Dr. Coleman had continued his field studies in South America, Mexico and Central America, attempting to gather further information on glaciation in those regions before the publication of his book.

One of his former students, Dr. G. F. Kay, himself an eminent glaciologist, was persuaded to edit the work and prepare it for publication. He has revised it slightly and brought it up to date.

The book is written in Coleman's simple style, readable both to layman and scientist alike, but his chief aim was to interest the lay reader in the various phases of the latest events of glacial interest in North America. He makes the subject interesting so that the traveller in any part of this continent can appreciate the significance of his surroundings better than if he had no knowledge of glaciology. His simple conversational style makes the volume as interesting as were his lectures to the student and the public.

Coleman deals with the abundant literature on glacial subjects mostly written on this continent, but also presents the problems of glaciation from a broader view by tying together many scattered observations and much new material from his own wide-spread studies.

He believed that there were two marine invasions in the Champlain Sea-Ottawa district, the deposits from those invasions being generally confused on account of their great similarity. He also believed that the tableland of Cape Breton had not been ice-covered, but later modified his views. He likewise thought that the higher parts of Gaspé and the coasts of Labrador were never entirely covered by large ice-sheets, but later investigations indicate a possibility that these may have also been glaciated, but precise information is still lacking in both places.

The book should be of interest to students who wish a simple picture of the problems of glaciation

(*Continued on Page VII*)

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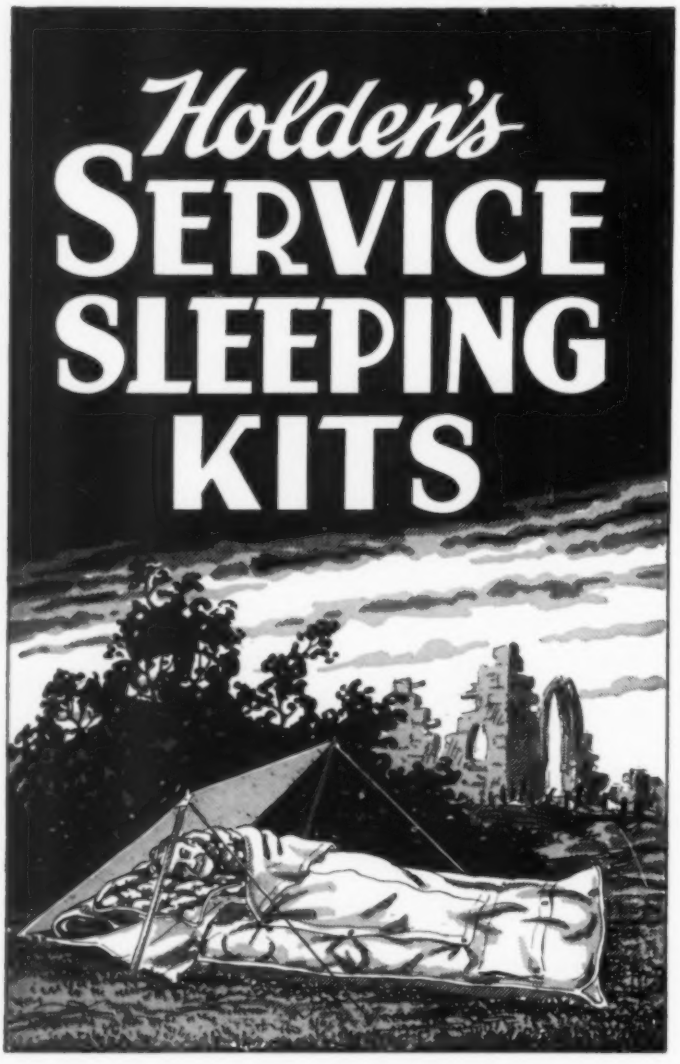

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before they advance to the more controversial research problems, and to scientists who wish to model their writings to a manner which will interest the public in these matters.

The many references given at the end of each chapter assist the reader who wishes to pursue his investigations in the subject of glaciology.

D. A. NICHOLS

Canada Gets The News by CARLTON MCNAUGHT. (The Ryerson Press, Toronto. Price $3.50).

This book tells what kind of newspapers are published in Canada, and why; and then it proceeds to examine the sources and channels of foreign news presented to Canada's newspaper readers. The adequacy or otherwise of the sources, and the competency of those who edit it are considered with much acumen, bolstered by research. Mr. McNaught evidently feels that Canadian newspapers fall short in some serious measure in their presentation of foreign news, but for reasons lucidly stated, he does not hold out much hope for improvement. The news agencies are required in theory to present news objectively, but the author contends that this objectivity is more apparent than real, and that a frankly personal interpretation would often be more illuminating. Only a small handful of Canadian newspapers can afford special foreign correspondents, and these tend to stress "colour" and "human interest" copy which does not add much to the Canadian's understanding of international developments. Our foreign news tends to be unduly influenced, because of the sources, by English or American viewpoints. The daily press of Canada has become "Big Business" and tends to reflect the "Country Club" viewpoint. Our foreign editors are, with a few brilliant exceptions, not highly paid, not widely travelled, and lacking either the background or the leisure for mature evaluation of foreign news.

The author does not despair of better levels; he predicts that a more enlightened people will demand better service in foreign news. Who is to ensure this "more enlightened people"? There's the rub. Will the newspaper publishers anticipate the demand, or will a new medium arise, leaving the present one "to provide entertainment and the more trivial kinds of news"? The book closes on that query.

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